

# THE Atlantic

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*Why more money is buying America less defense*

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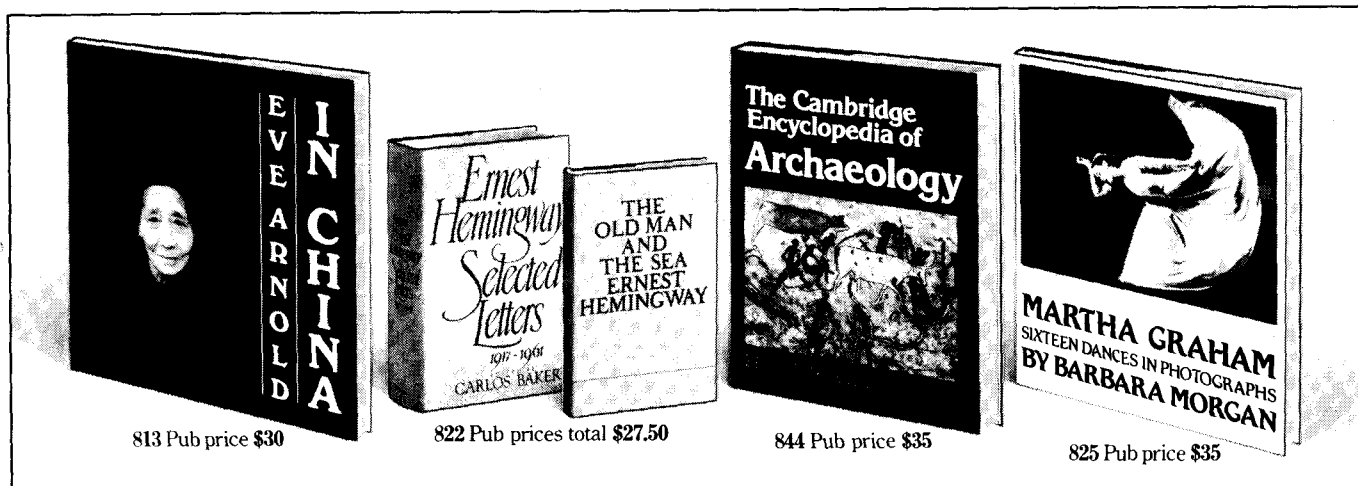
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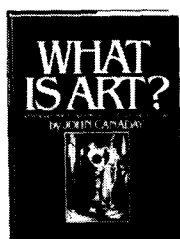
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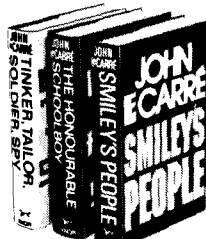
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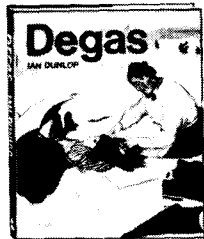
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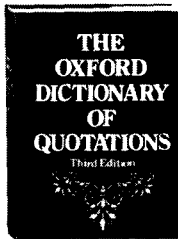
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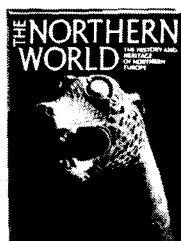
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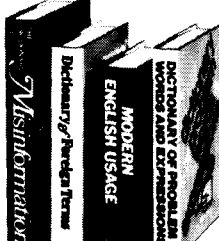
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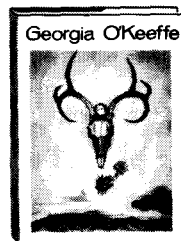
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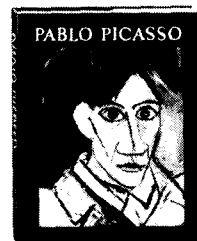
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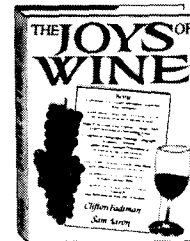
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# Social Security in Trouble

**T**he Social Security system and its faltering finances were the topic of discussion on a recent call-in talk show on a Washington, D.C. radio station. An anonymous caller came on the line. He described himself as a "triple dipper" — retired and the recipient of a military pension, a Civil Service pension, and Social Security payments. In addition, he said, his wife receives a government pension.

Two persons; four government pensions.

The total benefits, the caller said, were ample to meet all the couple's needs. In fact, part of their income was being siphoned off to help two daughters, both working, who couldn't make ends meet because of high income and Social Security taxes.

Such a paradox — *retired* parents helping to support *working* children — isn't quite what economists and sociologists have in mind when they speak of "inter-generational transfers." What they mean is income transferred from people currently working to those who were once workers and to the dependents or survivors of onetime workers. The income is transferred through taxes that are going up and up and growing increasingly burdensome. The taxes are paid both by employees and employers.

To be sure, the talk show caller's case is in no way typical. Yet it does point up what can happen when as a nation we patch together, over a period of 50 years, income security programs that the President's Commission on Pension Policy has called "riddled with inefficiencies and inequities."

"Numerous income security time bombs are now ticking away throughout this vast and complex sector of our society," the commission warned. The General Accounting Office, in a recent report, questioned the nation's "continuing ability to meet income security needs and

stay within acceptable spending levels."

The Social Security tax rate this year jumped from 6.13% to 6.65%. Additional increases are scheduled in 1982, 1985, and 1986. And the income base on which the tax is paid went up this year from \$25,900 to \$29,700. It will rise to \$50,000 in 1988.

Even with the new infusions of revenue, the Social Security fund faces trouble. It's expected to run in the red in the next year or two.

A key cause of the trouble is the annual increases in benefits pegged to the Consumer Price Index. Last year's increases totaled upwards of \$16 billion. While they're warmly welcomed by the recipients, they are helping to push the fund toward insolvency.

Proposals to stave off the fund's bankruptcy include raising the minimum age at which benefits are paid, revamping the method for calculating cost of living increases that drive up benefits year after year, phasing out spouses' benefits, and bringing government employees under the system.

Any of these revisions is sure to elicit outcries from the people and interest groups affected. Political sensitivities notwithstanding, the impending crisis simply must be confronted by the new Administration and the Congress.

"We must muster the will and the courage to look at the system as a whole and make the adjustments that are required," the President's Commission on Pension Policy said. "We have the capacity to construct a system that is more responsive to human needs and more equitable to all concerned."

The Secretary of Health and Human Services, Richard S. Schweiker, has vowed that untangling Social Security financing will be his top priority during the early months of the Reagan Administration. And none too soon.



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# THE Atlantic

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*Art direction by Walter Bernard, assisted by Terry Brown*

*Cover illustration by André Thijsen*

VOLUME 247 No. 5  
MAY 1981



Subscriptions: 1 Year \$18.00,  
2 Years \$33.00, 3 Years \$45.00  
in the United States, its  
possessions, and Canada;  
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Processing Center,  
Box 2547,  
Boulder, Colorado 80322

Advertising:  
Harper-Atlantic Sales, Inc.,  
420 Lexington Ave.,  
New York, N.Y. 10017.  
Tel: 212-687-2424  
Other offices in Boston,  
Philadelphia, Chicago, Detroit,  
San Francisco, Los Angeles.

The Atlantic, May 1981  
Vol. 247, No. 5  
Published monthly by  
the Atlantic Monthly Company,  
8 Arlington St., Boston, Mass.  
02116.

Controlled circulation  
postage paid at  
Boston, Mass., Concord, N.H.,  
and Boulder, Col.

Postage paid at Montreal,  
port payé à Montréal.  
Printed in the U.S.A.  
Copyright © 1981, by  
The Atlantic Monthly Company

(ISSN 0004-6795).

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## LETTERS TO THE EDITOR

### FOR SALE: FREE SPEECH

"Bizarre" is indeed the word to describe Charles Rembar's inconsistency in his attacks on the judiciary ("For Sale: Freedom of Speech," March Atlantic) for supporting power companies in cases involving regulation by the New York State Public Service Commission.

In the one case he castigates the Court for not recognizing that, when the country is held hostage to imported oil, the national interest is impaired by the squandering of oil-generated electricity.

Two paragraphs later he opposes the right of a utility to advocate to its customers the replacement of imported oil by less expensive nuclear energy as a source of electric power.

Since, as he notes, utility rates are determined by the state, the only advantage to the power company of a cheaper source of energy is that it could sell more electricity if its costs permitted lower rates.

Contrary to Mr. Rembar's assumption, many of us would not consider the public interest adversely affected by a reduction in the rates charged for electricity.

HERVEY B. ELKINS  
Belmont, Mass.

Charles Rembar's otherwise excellent article on the First Amendment does the Supreme Court an injustice by reporting the decision in the Con Ed case as holding that the audience, in that case the utility customer, "is paying for the privilege of being subjected to the commercial message."

In fact, the Court simply told the Public Service Commission to "stop telling Consolidated Edison to stop" its advertising. The attempt by the state to absolutely prohibit advertising is precisely what the First Amendment is all about.

The follow-up question—whether the cost of advertising is or is not an allowable cost of business to be passed on to utility customers—is a political-legislative matter that may or may not later raise a First Amendment issue. But

that question was not considered by the Supreme Court.

VICTOR F. GREENSLADE  
Shaker Heights, Ohio

*Charles Rembar replies:*

Mr. Elkins believes that the use of nuclear energy as a source of electric power is a good thing. Other people believe it is not. My article took no position on that question. The point I was making was that a power company's use of its captive customers' money to promote its own view of the nuclear energy issue creates the sort of unfairness that contradicts the First Amendment's underlying concepts.

Mr. Greenslade and I apparently differ not on whether advertising is entitled to First Amendment protection but on the extent of that protection. My article says, explicitly, that some advertising comes within the amendment's guarantee. I take it that Mr. Greenslade would agree that the government could stop cigarette companies, for example, from advertising that tar and nicotine are good for you.

### WHAT'S A JOB WORTH?

I read with interest, in the February issue, Vivienne Killingsworth's article "Labor: What's a Job Worth?" However, I was astonished at her conclusion that an "oversupply of nurses relative to tree-trimmers (or doctors or secretaries)" results in "an unfortunate economic situation for those who grow up to be nurses." Recently, almost every major newspaper has run articles citing the nation's critical shortage of nurses. There are many reasons for the low salaries of nurses, but an oversupply is certainly not one of them.

EILEEN VALINOTI  
Murray Hill, N.J.

*Vivienne Killingsworth replies:*

Ms. Valinoti has misunderstood my argument. She confuses the concept of an oversupply of nurses relative to doctors and other workers with that of an oversupply of nurses relative to the demand for nurses. Contrary to what

Ms. Valinoti says, I don't (and didn't) suggest that there are more nurses available than there are jobs for them but that, relative to supply, the demand for certain other workers (e.g. doctors and tree-trimmers) may be greater than that for nurses. Furthermore, nurses' salaries are indeed responsive to the market; there's evidence that they are beginning to rise in response to shortage. This bears out my conclusion that the comparable-worth approach to adjusting salaries is both mistaken and unnecessary.

What Vivienne Killingsworth fails to mention in her article is that the low salaries of nurses and teachers are determined to a great degree by the fact that they work for public or non-profit agencies rather than private industry. Public school teachers (and teachers in private schools, as well) have always been paid poorly—even when it was a predominantly male field, in the early nineteenth century. Taxpayers simply do not like to adequately compensate those they choose to serve the community at large.

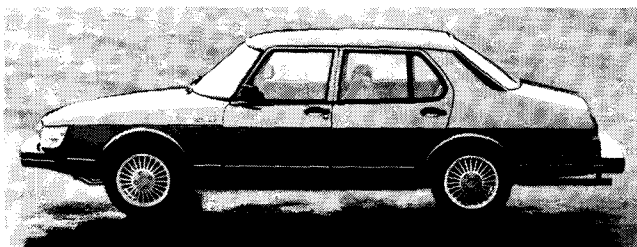
CHARLES R. PUTNEY  
Bennington, Vt.

I was the arbitrator in the case involving the major leagues of baseball that brought to an end the historic reserve system designed to prevent players who had signed with one club from negotiating with another club for future services. In consequence, many baseball players, as free agents, obtained million-dollar contracts.

Many people in all walks of life have expressed their indignation to me that baseball players should be compensated at a higher rate than teachers, nurses, skilled machinists, laboratory technicians, and others. Curiously, they seem to have been unconcerned that Robert Redford, Birgit Nilsson, Isaac Stern, and others in the entertainment world get higher pay than laboratory technicians in a biochemical laboratory.

It is a fact, not widely recognized, that government, employers, unions, arbitrators, and industrial engineers have no way to determine the "right" and the "ideally correct" compensation for personal services. There is no known technique for compensating people according to the social value of the tasks they perform. The only standard available to us (however unsatisfactory it

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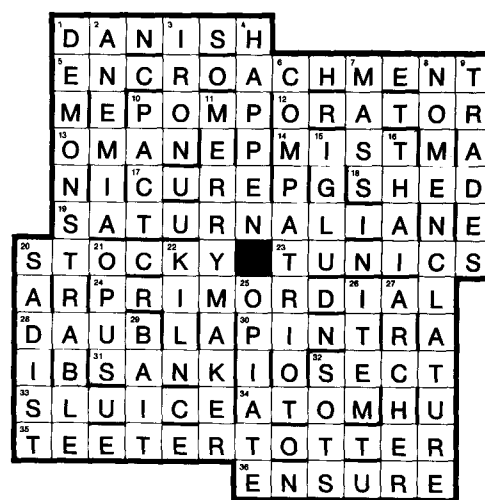
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# HOW TO CUT THE COST OF RUNNING YOUR HOUSEHOLD... AND YOUR COUNTRY.

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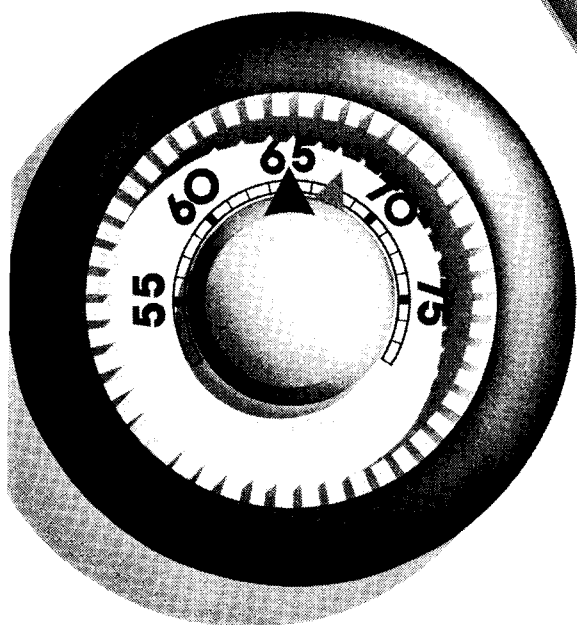
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may seem to many) is the *market value* of services. When we want to determine a wage, the best we can do is to order that a wage be paid that is equal to what is paid in the same industry and area for comparable jobs with comparable requirements and duties. Such a determination does not proclaim the ideally correct wage rate for the work done but it does fix a just rate relative to what others enjoy for similar skills, education, exertion, hazards, and other relevant factors in the job.

PETER SEITZ  
New York, N.Y.

## SOLON OR SOPHOCLES?

Anthony Brandt ("Rite of Passage," February *Atlantic*) writes: "Call no man happy until he be dead, said the Greek lawgiver Solon. But what would a wise man say to this?" This sounds like Sophocles, not Solon, to me. Isn't that the ending of *Oedipus*? Please advise.

JAMES GALLAGHER  
Monroeville, Pa.

Anthony Brandt replies:

If James Gallagher will refer to the first book of Herodotus, section 16ff., he will find the story of Solon's advice to Croesus, the gist of which is, no one can be called happy until he is dead. The statement also appears at the end of *Oedipus Rex*. My guess is that the statement was proverbial in ancient Greece, and that its actual origins are unknown.

## ABSTRACT EXPRESSIONISM

Jerome Klein may have underestimated Monet's importance in his otherwise splendid study "The Strange Posthumous Career of Claude Monet" (March *Atlantic*).

If we assume that impressionism sprang from the breaking up of light, and expressionism from the imaging of the unconscious, then Monet, in his *Water Lilies*, surely proved to be a supreme master of both. Further, his own words, as quoted (in a limiting context) by Klein, could just as easily be taken for an exquisite poetic definition of abstract expressionism. I requote: "he sought the 'illusion of an endless whole, of water without horizon or bank;

nerves tense from work would relax there . . . the refuge of a peaceable meditation in the center of a flowering aquarium.'"

EDWIN H. BLUM  
Beverly Hills, Calif.

Jerome Klein replies:

In attempting to convert the quotation from Monet at the end of my article into a "poetic definition of abstract expressionism," Mr. Blum diverts attention from my main argument. I undertook to demonstrate that the ragged, wild easel paintings done by Monet while he was legally blind as a consequence of cataracts had nothing to do with the spirit of abstract expressionism as it was defined by Clement Greenberg. Greenberg at least recognized that impressionism and abstract expressionism were polar opposites.

But Mr. Blum makes no reference to the main body of evidence, the easel paintings characterized by Greenberg as "slapdash." Instead Mr. Blum rests his case on the Water Lily murals, which rose so high in critical esteem in the early 1950s that the artist André Masson paid tribute to them with the apt phrase "the Sistine Chapel of Impressionism." What higher recognition could be accorded Monet's importance? Mr. Blum's deft phrase glosses over but does not bridge the gulf between the Impressionist Monet and the Abstract Expressionist.

## TIED UP IN KNOTS

William Allen's "Accidental Knots," in the March issue, was a pleasure to read. But it left me dangling: How and why did Mr. Allen's birdbath catch on fire? From a firefly? A burning bush? Let me know so I can unwind.

MARGERY K. ALBRIGHT  
Amissville, Va.

William Allen replies:

I know how my birdbath caught on fire but right now I don't even want to think about it. I will say that, unlike the knots in my garden hose, it was all my fault.

## ADVICE & CONSENT

James Conaway's "Cuban Prisoners in America" (February *Atlantic*) did

for the refugee situation in this country what rearranging the deck chairs on the *Titanic* did for the ultimate fate of that ship. Nothing.

Mr. Conaway indicates that no riot really took place at Fort Chaffee on June 1, 1980—that a group of "mostly teenagers breaking into a trot, some laughing, some dancing," simply pushed past military police. That comment is accompanied by a photo taken just as this playful group of 300 or so Cubans began moving toward the main gate of the fort. Unfortunately, Mr. Conaway was not there on June 1. Our photographer, the one who took the picture used with Mr. Conaway's story, was. He had to run for his life. His car was pelted with rocks thrown by that playful little group.

Mr. Conaway also takes the Fort Smith newspaper, the *Southwest Times Record*, to task for not pointing out in a front-page story that a picture of "two flagrantly homosexual Cubans" on the same page was not taken at a halfway house for refugees, which was the subject of the story. That is true, but the author ignores the fact that a caption beneath the picture clearly stated exactly where it was taken and what it depicted.

JACK MOSELEY  
Editor, *Southwest Times Record*  
Fort Smith, Ark.

James Glassman's article "Back to the Gold Standard?" (February *Atlantic*) was very enjoyable. However, he too fell into the mathematical weights-and-measures trap by saying "eleven pounds of gold weighs 176 ounces." Gold is measured in troy ounces, and 12 English troy ounces equal one troy pound.

JAMES MILLER  
New York, N.Y.

I am not surprised by W. Bowman Cutler's explanation of why Jimmy Carter couldn't get real budget reform out of Congress ("The Battle of the Budget," March *Atlantic*). It is what one would expect from a representative of the administration that, when it discovered that the public was disenchanted with its leader, labeled the problem "malaise" and said it was the cause rather than the effect of the President's ineffectuality.

JAMES NATHAN MILLER  
Croton-on-Hudson, N.Y.



## WYOMING

# THE SOLACE OF OPEN SPACES

*Wyoming's sweeping landscape  
may be the "doing of a mad architect,"  
but for the state's 470,000 residents,  
vastness is all.*



IT'S MAY, AND I've just awakened from a nap, curled against sagebrush the way my dog taught me to sleep—sheltered from wind. A front is pulling the huge sky over me, and from the dark a hailstone has hit me on the head. I'm trailing a band of 2000 sheep across a stretch of Wyoming badland, a fifty-mile trip that takes five days because sheep shade up in hot sun and won't budge until it cools. Bunched together now, and excited into a run by the storm, they drift across dry land, tumbling into draws like water and surging out again onto the rugged, choppy plateaus that are the building blocks of this state.

The name Wyoming comes from an Indian word meaning "at the great plains," but the plains are really valleys, great arid valleys, 1600 square miles, with the horizon bending up on all sides into mountain ranges. This gives the vastness a sheltering look.

Winter lasts six months here. Prevailing winds spill snowdrifts to the east, and new storms from the northwest replenish them. This white bulk is sometimes dizzying, even nauseating, to look at. At twenty, thirty, and forty degrees below zero, not only does your car not work but neither do your mind and body. The landscape hardens into a dungeon of space. During the winter, while I was riding to find a new calf, my legs froze to the saddle, and in the silence that such cold creates I felt like the first person on earth, or the last.

Today the sun is out—only a few clouds billowing. In the east, where the sheep have started off without me, the benchland tilts up in a series of red-earthed, eroded mesas, planed flat on top by a million years of water; behind them, a bold line of muscular scarps rears up 10,000 feet to become the Big Horn Mountains. A tidal pattern is engraved into the ground, as if left by

the sea that once covered this state. Canyons curve down like galaxies to meet the oncoming rush of flat land.

To live and work in this kind of open country, with its hundred-mile views, is to lose the distinction between background and foreground. When I asked an older ranch hand to describe Wyoming's openness, he said, "It's all a bunch of nothing—wind and rattlesnakes—and so much of it you can't tell where you're going or where you've been and it don't make much difference." John, a sheepman I know, is tall and handsome and has an explosive temperament. He has a perfect intuition about people and sheep. They call him "Highpockets," because he's so long-legged; his graceful stride matches the distances he has to cover. He says, "Open space hasn't affected me at all. It's all the people moving in on it." The huge ranch he was born on takes up much of one county and spreads into another state; to put 100,000 miles on his pickup in three years and never leave home is not unusual. A friend of mine has an aunt who ranched on Powder River and didn't go off her place for eleven years. When her husband died, she quickly moved to town, bought a





car, and drove around the States to see what she'd been missing.

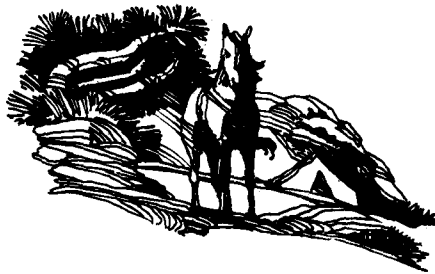
Most people tell me they've simply driven through Wyoming, as if there were nothing to stop for. Or else they've skied in Jackson Hole, a place Wyomingites acknowledge uncomfortably, because its green beauty and chic affluence are mismatched with the rest of the state. Most of Wyoming has a "lean-to" look. Instead of big, roomy barns and Victorian houses, there are dugouts, low sheds, log cabins, sheep camps, and fence lines that look like driftwood blown haphazardly into place. People here still feel pride because they live in such a harsh place, part of the glamorous cowboy past, and they are determined not to be the victims of a mining-dominated future.

Most characteristic of the state's landscape is what a developer euphemistically describes as "indigenous growth right up to your front door"—a reference to waterless stands of salt sage, snakes, jackrabbits, deerflies, red dust, a brief respite of wildflowers, dry washes, and no trees. In the Great Plains, the vistas look like music, like kyries of grass, but Wyoming seems to be the doing of a mad architect—tumbled and twisted, ribboned with faded, deathbed colors, thrust up and pulled down as if the place had been startled out of a deep sleep and thrown into a pure light.



I CAME HERE FOUR years ago. I had not planned to stay, but I couldn't make myself leave. John, the sheepman, put me to work immediately. It was spring, and shearing time. For fourteen days of fourteen hours each, we moved thousands of sheep through sorting corrals to be sheared, branded, and deloused. I suspect that my original motive for coming here was to "lose myself" in new and unpopulated territory. Instead of producing the numbness I thought I wanted, life on the sheep ranch woke me up. The vitality of the people I was working with flushed out what had become a hallucinatory rawness inside me. I threw away my clothes and bought new ones; I cut my hair. The arid country was a clean slate. Its absolute indifference steadied me.

Sagebrush covers 58,000 square miles of Wyoming. The biggest city has a pop-



ulation of 50,000, and there are only five settlements that could be called cities in the whole state. The rest are towns, scattered across the expanse with as much as sixty miles between them, their populations 2000, fifty, or ten. They are fugitive-looking, perched on a barren, windblown bench, or tagged onto a river or a railroad, or laid out straight in a farming valley with implement stores and a block-long Mormon church. In the eastern part of the state, which slides down into the Great Plains, the new mining settlements are boomtowns, trailer cities, metal knots on flat land.

Despite the desolate look, there's a coziness to living in this state. There are so few people (only 470,000) that ranchers who buy and sell cattle know each other statewide; the kids who choose to go to college usually go to the state's one university, in Laramie; hired hands work their way around Wyoming in a lifetime of hirings and firings. And, despite the physical separation, people stay in touch, often driving two or three hours to another ranch for dinner.

Seventy-five years ago, when travel was by buckboard or horseback, cowboys who were temporarily out of work rode the grub line—drifting from ranch to ranch, mending fences or milking cows, and receiving in exchange a bed and meals. Gossip and messages traveled this slow circuit with them, creating an intimacy between ranchers who were three and four weeks' ride apart. One old-time couple I know, whose turn-of-the-century homestead was used by an outlaw gang as a relay station for stolen horses, recall that if you were traveling, desperado or not, any lighted ranch house was a welcome sign. Even now, for someone who lives in a remote spot, arriving at a ranch or coming to town for supplies is cause for celebration. To emerge from isolation can be disorienting. Everything looks bright, new, vivid. After I had been herding sheep for only three days, the sound of the camp-tender's pickup flus-

tered me. Longing for human company, I felt a foolish grin take over my face, yet I had to resist an urgent temptation to run and hide.

Things happen suddenly in Wyoming: the change of seasons and weather; for people, the violent swings in and out of isolation. But goodnaturedness is concomitant with severity. Friendliness is a tradition. Strangers passing on the road wave hello. A common sight is two pickups stopped side by side far out on a range, on a dirt track winding through the sage. The drivers will share a cigarette, uncup their thermos bottles, and pass a battered cup, steaming with coffee, between windows. These meetings summon up the details of several generations, because in Wyoming, private histories are largely public knowledge.

Because ranch work is a physical and, these days, economic strain, being "at home on the range" is a matter of vigor, self-reliance, and common sense. A person's life is not a series of dramatic events for which he or she is applauded or exiled but a slow accumulation of days, seasons, years, fleshed out by the generational weight of one's family and anchored by a land-bound sense of place.



IN MOST PARTS of Wyoming, the human population is visibly outnumbered by the animal. Not far from my town of fifty, I rode into a narrow valley and startled a herd of 200 elk. Eagles look like small people as they eat car-killed deer by the road. Antelope, moving in small, graceful bands, travel at 60 miles an hour, their mouths open as if drinking in the space.

The solitude in which westerners live makes them quiet. They telegraph thoughts and feelings by the way they tilt their heads and listen; pulling their Stetsons into a steep dive over their eyes, or pigeon-toeing one boot over the other, they lean against a fence with a fat wedge of snooze beneath their lower lips and take the whole scene in. These detached looks of quiet amusement are sometimes cynical, but they can also come from a dry-eyed humility as lucid as the air is clear.

Conversation goes on in what sounds like a private code; a few phrases imply a complex of meanings. Asking direc-

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tions, you get a curious list of details. While trailing sheep, I was told to "ride up to that kinda upturned rock, follow the pink wash, turn left at the dump, and then you'll see the waterhole." One friend told his wife on roundup to "turn at the salt lick and the dead cow," which turned out to be a scattering of bones and no salt lick at all.

Sentence structure is shortened to the skin and bones of a thought. Descriptive words are dropped, even verbs; a cowboy looking over a corral full of horses will say to a wrangler, "Which one needs rode?" People hold back their thoughts in what seems to be a dumbfounded silence, then erupt with an excoriating, perceptive remark. Language, so compressed, becomes metaphorical. A rancher ended a relationship with one remark: "You're a bad check," meaning bouncing in and out was intolerable, and even coming back would be no good.

What's behind this laconic style is shyness. There is no vocabulary for the subject of feelings. It's not a hand-dog shyness, or anything coy—always there's a robust spirit in evidence behind the restraint, as if the earth-dredging wind that pulls across Wyoming had carried its people's voices away but everything else in them had shouldered confidently into the breeze.

I've spent hours riding to sheep camp at dawn in a pickup when nothing was said; eaten meals in the cookhouse when the only words spoken were a mumbled "Thank you, ma'am" at the end of dinner. The silence is profound. Instead of talking, we seem to share one eye. Keenly observed, the world is transformed. The landscape is engorged with detail, every movement on it chillingly sharp. The air between people is charged. Days unfold, bathed in their own music. Nights become hallucinatory; dreams, prescient.



**S**PRING WEATHER IS capricious and mean. It snows, then blisters with heat. There have been tornadoes. They lay their elephant trunks out in the sage until they find houses, then slurp everything up and leave. I've noticed that melting snowbanks hiss and rot, viperous, then drip into calm pools where ducklings hatch and livestock, being trailed to summer range, drink.

With the ice cover gone, rivers churn a milkshake brown, taking culverts and small bridges with them. Water in such an arid place (the average annual rainfall where I live is less than eight inches) is like blood. It festoons drab land with green veins: a line of cottonwoods following a stream; a strip of alfalfa; and on ditchbanks, wild asparagus growing.

I've moved to a small cattle ranch owned by friends. It's at the foot of the Big Horn Mountains. A few weeks ago, I helped them deliver a calf who was stuck halfway out of his mother's body. By the time he was freed, we could see a heartbeat, but he was straining against a swollen tongue for air. Mary and I held him upside down by his back feet, while Stan, on his hands and knees in the blood, gave the calf mouth-to-mouth resuscitation. I have a vague memory of being pneumonia-choked as a child, my mother giving me her air, which may account for my romance with this windswept state.

If anything is endemic to Wyoming, it is wind. This big room of space is swept out daily, leaving a boneyard of fossils, agates, and carcasses in every stage of decay. Though it was water that initially shaped the state, wind is the meticulous gardener, raising dust and pruning the sage.



**I** TRY TO IMAGINE a world of uncharted land, in which one could look over an uncompleted map and ride a horse past where all the lines have stopped. There is no wilderness left; wildness, yes, but true wilderness has been gone on this continent since the time of Lewis and Clark's overland journey.

Two hundred years ago, the Crow, Shoshone, Arapaho, Cheyenne, and Sioux roamed the intermountain West, orchestrating their movements according to hunger, season, and warfare.



Once they acquired horses, they traversed the spines of all the big Wyoming ranges—the Absarokas, the Wind Rivers, the Tetons, the Big Horns—and wintered on the unprotected plains that fan out from them. Space was life. The world was their home.

What was life-giving to native Americans was often nightmarish to sod-busters who arrived encumbered with families and ethnic pasts to be transplanted in nearly uninhabitable land. The great distances, the shortage of water and trees, and the loneliness created unexpected hardships for them. In her book *O Pioneers!*, Willa Cather gives a settler's version of the bleak landscape:

The little town behind them had vanished as if it had never been, had fallen behind the swell of the prairie, and the stern frozen country received them into its bosom. The homesteads were few and far apart; here and there a windmill gaunt against the sky, a sod house crouching in a hollow.

The emptiness of the West was for others a geography of possibility. Men and women who amassed great chunks of land and struggled to preserve unfenced empires were, despite their self-serving motives, unwitting geographers. They understood the lay of the land. But by the 1850s, the Oregon and Mormon trails sported bumper-to-bumper traffic. Wealthy landowners, many of them aristocratic absentee landlords, known as remittance men because they were paid to come West and get out of their families' hair, overstocked the range with more than a million head of cattle. By 1885, the feed and water were desperately short, and the winter of 1886 laid out the gaunt bodies of dead animals so closely together that when the thaw came, one rancher from Kaycee claimed to have walked on cowhide all the way to Crazy Woman Creek, twenty miles away.

Territorial Wyoming was a boy's world. The land was generous with everything but water. At first there was room enough, food enough, for everyone. And, as with all beginnings, an expansive mood set in. The young cowboys, drifters, shopkeepers, schoolteachers, were heroic, lawless, generous, rowdy, and tenacious. The individualism and optimism generated during those times have endured.

John Tisdale rode north with the



# A LAMP—NOT A BREADBASKET



The fluctuating flow of immigrants into our country never stops. The trend is up. We don't know what to do about it because our thoughts are shackled by the lines below the Statue of Liberty: "Give me your tired, your poor, your huddled masses."

ALL the poor? The poem by Emma Lazarus makes no mention of numbers. **But numbers matter.**

A century ago an open-ended invitation may have been safe enough. America was a new country then, unfilled. The supply of possible immigrants wasn't so great. Now, the huddled masses of the wretchedly poor amount to 800 million. More than three times the U.S. population. It would be insane to invite them all in. Even one percent would be too many.

Variety in a nation is good. So also is unity. But when variety (of which we've always had plenty) overwhelms unity, how are we to keep a complex society like ours running?

When newcomers arrive too fast, they gather into enclaves and resist learning the national language. Immigrants then become the *new isolationists*. Tribalism becomes a reality: *Goodbye, unity!*

If tribalism takes over, America will become like the countries from which the immigrants fled. To give the immigrants we admit the benefits they seek we must restrict the flow of immigration.

Saving all the world's poor is beyond us—that's a tragic fact we must accept. The wretchedly poor are increasing by some 25 million per year. Immigration into the U.S. was perhaps only 2 million last year, but even that amount strained the fabric of our society. Remember Miami? Remember Fort Chaffee?

What effect does our acceptance of immigrants have on the country that sends them? In the long run, it may actually harm the sending country. When we take in the most competent people, we leave the sending country worse off. "Brain-drain." Skills-drain. But if we take in the least competent—what does that do to us?

Every action is a message. Sometimes several messages. Last year Cuba sent us 120,000 people all at once. We accepted them. So our first message to Castro was this: "If you have any people you want to get rid of, just send them to us."

Why so many? Enter: the population problem. Every poor country has too many people for the actual carrying capacity of its land. That's *why* its people are poor. Cuba's 10 million people are increasing by 120,000 per year. Is it pure coincidence that the so-called "Freedom Flotilla" brought us 120,000 Cubans? So our second message to Cuba—and all other poor countries—was this: "If you have a population problem, just ship it to us."

Our third message was addressed to Castro and all other dictators. Castro sent us the people he most wanted to get rid of: independent and unruly people who endangered his dictatorship. In accepting them we said this to all evil rulers: "No need for you to reform. Just send us all your malcontents. That way we will help you dictators stay in power."

Are those the messages we want to send? Is that what the Statue of Liberty really means?

Lazarus's lines are NOT part of the statue on Liberty Island. These lines were not added until almost two decades after the statue was dedicated. The real name of the statue is, and always has been, "*Liberty Enlightening the World*."

Not welcoming all the world. Not even feeding the world. *Enlightening it.*

As a torch sends rays of light out into dark places, so America should send out messages that will, if heeded, eventually improve life in other parts of the world. We must be very careful about the messages we send. What messages are most needed now? These:

***For the sake of peace, each sovereign nation must solve its population problem on its own territory. The methods chosen must fit each nation's traditions and culture. Different cultures, different methods, different policies.***

***Because uncontrolled population growth has no limit, no population problem can ever really be solved by exporting it. We in America do not try to solve our problem by exporting it; nor will we permit you to export your population problem to us.***

Such are the messages America should send the world. What the Statue of Liberty holds aloft is not a breadbasket, but a torch or lamp. Liberty cannot feed the world; but it can enlighten it.

Garrett Hardin



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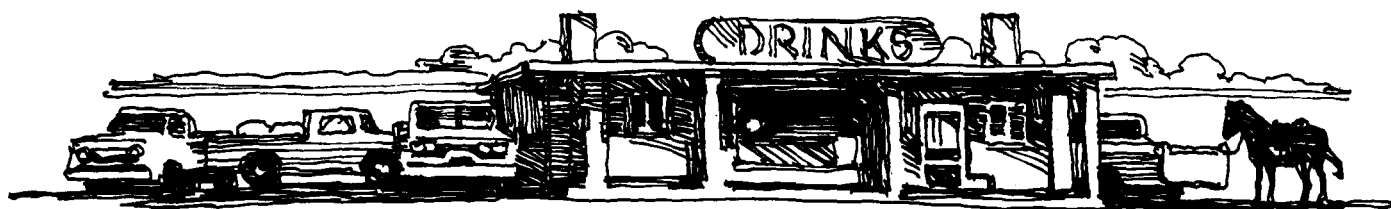
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trail herds from Texas. He was a college-educated man with enough money to buy a small outfit near the Powder River. While driving home from the town of Buffalo with a buckboard full of Christmas toys for his family and a winter's supply of food, he was shot in the back by an agent of the cattle barons who resented the encroachment of small-time stockmen like him. The wealthy cattlemen tried to control all the public grazing land by restricting membership in the Wyoming Stock Growers Association, as if it were a country club. They ostracized from roundups and brandings cowboys and ranchers who were not members, then denounced them as rustlers. Tisdale's death, the second such cold-blooded murder, kicked off the Johnson County cattle war, which was no simple good-guy-bad-guy shoot-out but a complicated class struggle between landed gentry and less affluent settlers—a shocking reminder that the West was not an egalitarian sanctuary after all.

Fencing ultimately enforced boundaries, but barbed wire abrogated space. It was stretched across the beautiful valleys, into the mountains, over desert badlands, through buffalo grass. The “anything is possible” fever—the lure of any new place—was constricted. The integrity of the land as a geographical body, and the freedom to ride anywhere on it, was lost.

I punched cows with a young man named Martin, who is the great-grandson of John Tisdale. His inheritance is not the open land that Tisdale knew and prematurely lost but a rage against restraint.



WYOMING TIPS DOWN as you head northeast; the highest ground—the Laramie Plains—is on the Colorado border. Up where I live, the Big Horn River leaks into difficult, arid terrain. In the basin where it's dammed, sandhill cranes gather and, with delicate legwork, slice through the stilled water.

I was driving by with a rancher one morning when he commented that cranes are “old-fashioned.” When I asked why, he said, “Because they mate for life.” Then he looked at me with a twinkle in his eyes, as if to say he really did believe in such things but also understood why we break our own rules.

In all this open space, values crystallize quickly. People are strong on scruples but tenderhearted about quirky behavior. A friend and I found one ranch hand, who's “not quite right in the head,” sitting in front of the badly decayed carcass of a cow, shaking his finger and saying, “Now, I don't want you to do this ever again!” When I asked what was wrong with him, I was told, “He's goofier than hell, just like the rest of us.” Perhaps because the West is historically new, conventional morality is still felt to be less important than rock-bottom truths. Though there's always a lot of teasing and sparring around, people are blunt with each other, sometimes even cruel, believing honesty is stronger medicine than sympathy, which may console but often conceals.

The formality that goes hand in hand with the rowdiness is known as “the Western Code.” It's a list of practical dos and don'ts, faithfully observed. A friend, Cliff, who runs a trapline in the winter, cut off half his foot while axing a hole in the ice. Alone, he dragged himself to his pickup and headed for town, stopping to open the ranch gate as he left, and getting out to close it again, thus losing, in his observance of rules, precious time and blood. Later, he commented, “How would it look, them having to come to the hospital to tell me their cows had gotten out?”

Accustomed to emergencies, my friends doctor each other from the vet's bag with relish. When one old-timer suffered a heart attack in hunting camp, his partner quickly stirred up a brew of red horse liniment and hot water and made the half-conscious victim drink it, then tied him onto a horse and led him twenty miles to town. He

regained consciousness and lived.

The roominess of the state has affected political attitudes as well. Ranchers keep up with world politics and the convulsions of the economy but are basically isolationists. Being used to running their own small empires of land and livestock, they're suspicious of big government. It's a “don't fence me in” holdover from a century ago. They still want the elbow room their grandfathers had, so they're strongly conservative, but with a populist twist.



SUMMER IS THE season when we get sour “cowboy tans”—on the lower parts of our faces and on three fourths of our arms. Excessive heat, in the nineties and higher, sends us outside with the mosquitoes. In winter, we're tucked inside our houses, and the white wasteland outside appears to be expanding, but in summer, all the greenery abridges space. Summer is a go-ahead season. Every living thing is off the block and in the race: battalions of bugs in flight and biting; bats swinging around my log cabin as if the bases were loaded and someone had hit a home run. Some of summer's high-speed growth is ominous: larkspur, death camas, and green greasewood can kill sheep—an ironic idea, dying in this desert from eating what is too verdant. With sixteen hours of daylight, farmers and ranchers irrigate feverishly. There are first, second, and third cuttings of hay, some crews averaging only four hours of sleep a night for weeks. And, like the cowboys who in summer ride the night rodeo circuit, nighthawks make daredevil dives at dusk with an eerie whirring that sounds like a plane going down on the shimmering horizon.

In the town where I live, they've had to board up the dance-hall windows because there have been so many fights. There's so little to do except work that people wind up in a state of idle agitation that becomes fatalistic, as if there



# Myth:

All freight carriers compete on an equal basis.

# Fact:

Public subsidies for trucks and barges throw competition out of balance.

You, as an individual, pay part of the cost for everything shipped by truck or barge—whether you use it or not.

The public roads and highways—the rights-of-way for heavy trucks—are built and maintained primarily by money collected from drivers of passenger cars and light trucks. If a product travels by barge, it moves through locks and dams and over waterways built and maintained almost entirely with your tax dollars.

Nearly all of America's freight railroads build, maintain and pay taxes on their track and rights-of-way, and these costs are paid from dollars earned by the railroads. As a result, it costs the railroads 34¢ out of every dollar of revenue for track and rights-of-way, compared to the 5¢ paid by trucks and the .003¢ paid by barges, neither of which amounts to a fair share of costs.

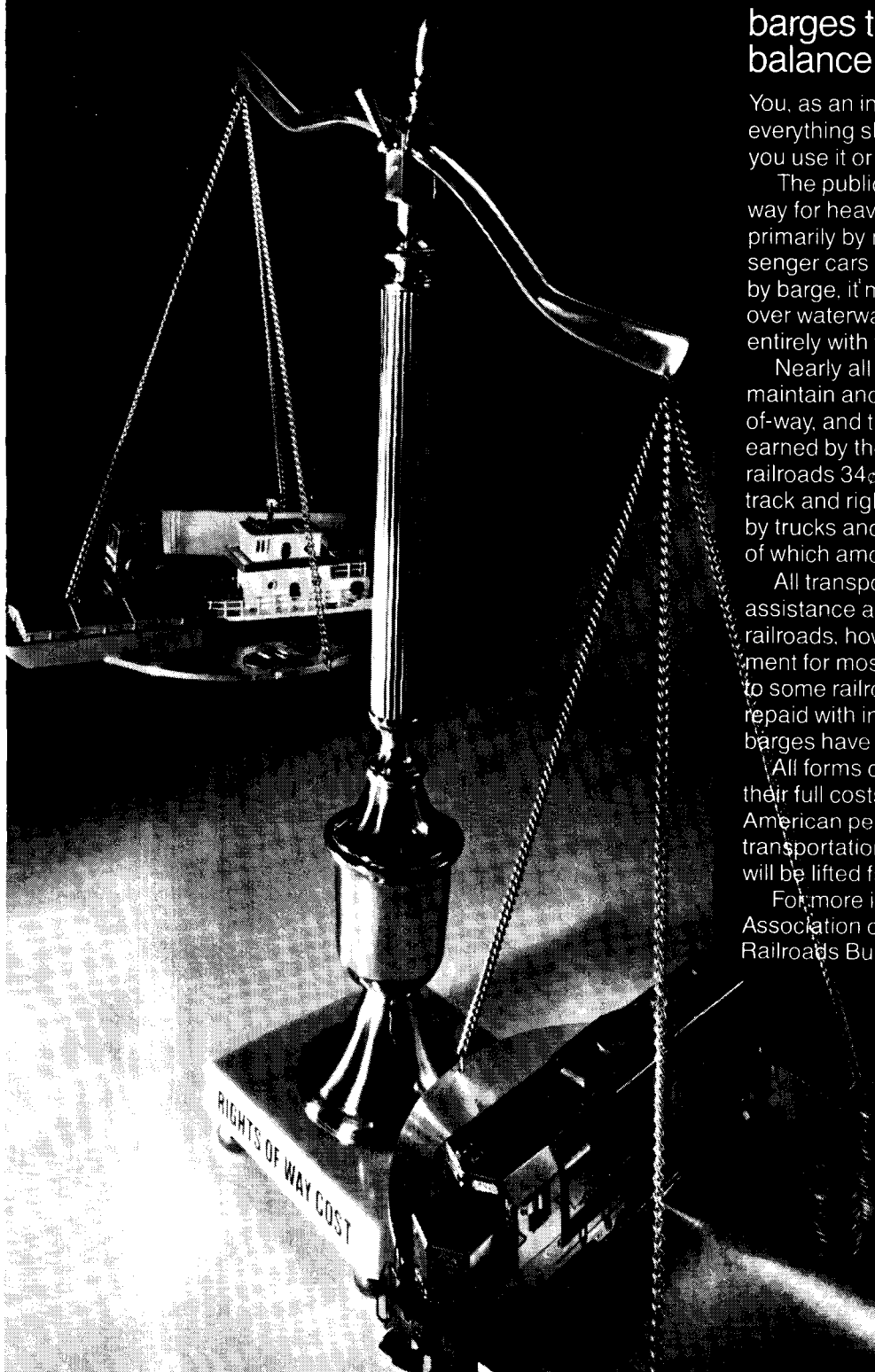
All transportation has received government assistance at one time or another. The freight railroads, however, have reimbursed the government for most prior aid. Much of the current aid to some railroads is in the form of loans to be repaid with interest. On the other hand, trucks and barges have long received outright subsidies.

All forms of freight transportation should pay their full costs of doing business. When they do, the American people will receive the most economical transportation services—and the burden of cost will be lifted from the motorists and taxpayer.

For more information, write to Competition, Dept. 16, Association of American Railroads, American Railroads Building, Washington, D.C. 20006.

# Surprise:

Rights-of-way costs are heavy for America's freight railroads: motorists and taxpayers carry most of the burden for highways and waterways.



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by  
John H. Lehnert

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A

were nothing to be done about all this untapped energy. So the dark side to the grandeur of these spaces is the small-mindedness that seals people in. Men become hermits; women go mad. Cabin fever explodes into suicides, or into grudges and lifelong family feuds. Two sisters in my area inherited a ranch but found they couldn't get along. They fenced the place in half. When one's cows got out and mixed with the other's, the women went at each other with shovels. They ended up in the same hospital room, but never spoke a word to each other for the rest of their lives.

Eccentricity ritualizes behavior. It's a shortcut through unmanageable emotions and strict social conventions. I knew a sheepherder named Fred who, at seventy-eight, still had a handsome face, which he kept smooth by plastering it each day with bag balm and Vaseline. He was curious, well-read, and had a fact-keeping mind to go along with his penchant for hoarding. His reliquary of gunnysacks, fence wire, wood, canned food, unopened Christmas presents, and magazines matched his odd collages of meals: sardines with maple syrup; vegetable soup garnished with Fig Newtons. His wagon was so overloaded that he had to sleep sitting up because there was no room on the bed. Despite his love of up-to-date information, Fred died from gangrene when an old-timer's remedy of fresh sheep manure, applied as a poultice to a bad cut, failed to save him.

AFTER THE BRIEF lushness of summer, the sun moves south. The range grass is brown. Livestock has been trailed back down from the mountains. Waterholes begin to frost over at night. Last fall Martin asked me to accompany him on a pack trip. With five horses, we followed a river into the mountains behind the tiny Wyoming town of Meeteetse. Groves of aspen, red and orange, gave off a light that made us look toasted. Our hunting camp was so high that clouds skidded across our foreheads, then slowed to sail out across the warm valleys. Except for a bull moose who wandered into our camp and mistook our black gelding for a rival, we shot at nothing.

One of our evening entertainments was to watch the night sky. My dog,

who also came on the trip, a dingo bred to herd sheep, is so used to the silence and empty skies that when an airplane flies over he always looks up and eyes the distant intruder quizzically. The sky, lately, seems to be much more crowded than it used to be. Satellites make their silent passes in the dark with great regularity. We counted eighteen in one hour's viewing. How odd to think that while they circumnavigated the planet, Martin and I had moved only six miles into our local wilderness, and had seen no other human for the two weeks we stayed there.

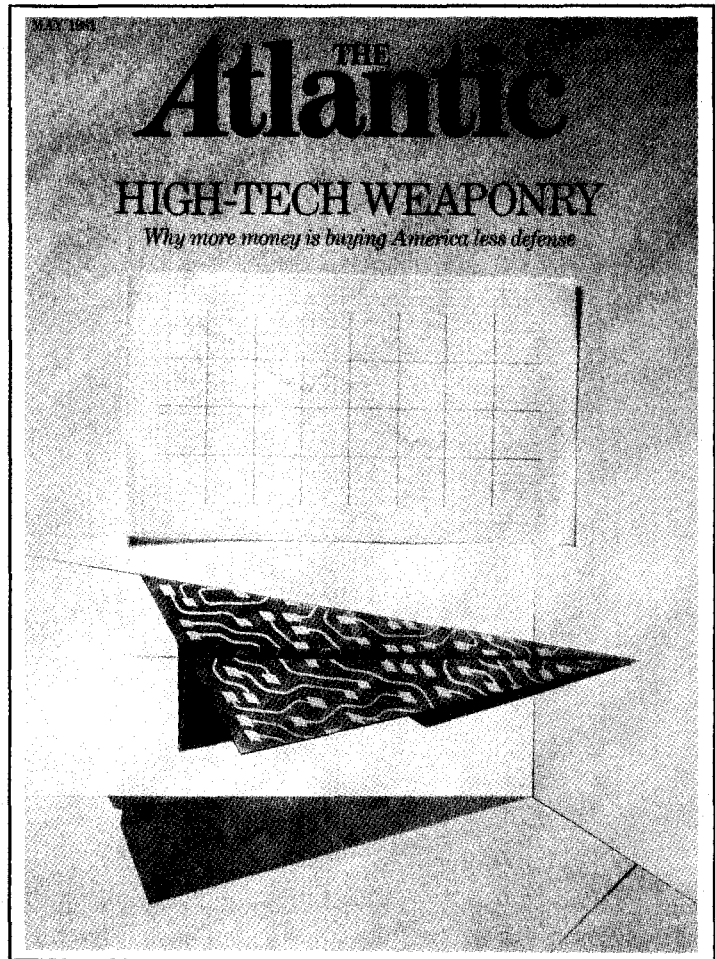
At night, by moonlight, the land is whittled to slivers—a ridge, a river, a strip of grassland stretching to the mountains, then the huge sky. One morning a full moon was setting in the west just as the sun was rising. I felt precariously balanced between the two as I loped across a meadow. For a moment, I could believe that the stars, which were still visible, work like cooper's bands, holding everything above Wyoming together.

SPACE HAS A spiritual equivalent, and I can heal what is divided and burdensome in us. My grandchildren will probably use space shuttles for a honeymoon trip or to recover from heart attacks, but closer to home we might also learn how to carry space inside ourselves in the effortless way we carry our skins. Space represents sanity, not a life purified, dull, or "spaced out" but one that might accommodate intelligently any idea or situation.

From the clayey soil of northern Wyoming is mined bentonite, which is used as a filler in candy, gum, and lipstick. We Americans are great on fillers, as if what we have, what we are, is not enough. We have a cultural tendency toward denial, but, being affluent, we strangle ourselves with what we can buy. We have only to look at the houses we build to see how we build *against* space, the way we drink against pain and loneliness. We fill up space as if it were a pie shell, with things whose opacity further obstructs our ability to see what is already there.

—Gretel Ehrlich

Gretel Ehrlich, a writer and occasional ranch hand, lives in Shell, Wyoming.



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## YOUR TRANSIT COMMISSION

BY GARRISON KEILLOR

**Y**OUR TRANSIT COMMISSION is moving ahead. Hundreds of brand-new buses in bright, fresh colors, a brand-new approach to maintenance, plus some brand-new *concepts* in urban transit—they all point to a brand-new *transit experience* for you, the transit consumer.

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Legitimate fears, obsessions. "Bus-riding is the ultimate test of democracy," someone once said. Maybe it was you. If it was, you haven't seen us lately.

Your Transit Commission is more

than just a transit commission. It is a total urban transit delivery system. The old days of transit are behind us. We've turned the corner. We aren't what you think we are! We are something entirely different!

*Get on the bus.* Notice something different? Maybe it's the driver's designer uniform. No more dull khaki or olive drab. Our drivers have come alive in shocking pinks, brilliant blues, dazzling yellows and greens, dynamite reds and oranges. What's more, your driver's uniform is coordinated with the overall design concept of your bus. Each bus on the line is unique—each individually conceptualized by a well-known designer! One bus incorporates a *Star Wars* theme. Another employs a midwestern small-town motif. Another employs linear and spatial relationships in startlingly new and yet ultimately valid ways. One is done in leather. Another is a living Edward Hopper tableau.

No more institutional colors! We've made bus-riding an experience that engages the senses! You will find that you can't *wait* for your bus to come!

*Get on the bus.* Notice the cleaning lady pushing her cleaning-lady cart up and down the aisle. Swabbing, sweeping, mopping, scraping, vacuuming, humming to herself. Candy wrappers are sucked up the moment they hit the deck. Graffiti disappear before the ink is dry. Windows sparkling clean. Ripped seats mended. Air freshened. Back and forth she goes, cleaning each

seat as it is vacated. "I will have your seat ready for you in just a moment, sir," she says.

While you are waiting, notice the full-color brochures in the rack behind the driver's seat. Take one. The brochure describes your Transit Commission. It describes the route of your bus, scenic and historic points to look for along the way, noteworthy events in the history of the route, famous people who have ridden along the route, plus data on the typical rider of today—a socioeconomic profile, voting patterns, public opinions—and a bio of your driver. Stuff you might not have guessed from looking at the back of your driver's head.

- One is a colonel (ret.), USMC.
- Many collect rare coins and stamps.
- Two are poets.
- One is a nudist.
- More than fifty are Presbyterians.

Your Transit Commission wants to make bus-riding personal. We've taken down that old "Unnecessary Conversations" sign. We *want* you to talk with your driver, to exchange ideas and offer insights and share experiences. So introduce yourself! And pour yourself a complimentary cup of coffee from the urn just below the cashbox. It's brewed fresh hourly!

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A Runners' Bus. We're proud of this one because we designed it ourselves. We put the seats in the middle, where the aisle used to be, and a running track around the sides, where the seats used to be (moving stanchions hold the runners in and prevent injuries due to vehi-

*Garrison Keillor is the host of an unusual program called A Prairie Home Companion, which is broadcast live from St. Paul, Minnesota, every Saturday night on National Public Radio.*

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## ATLANTIC MONTHLY PRESS BOOKS



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He has now, boldly, begun his popular writing career with a book that follows cosmic evolution from the moment the universe began until the human race reached the fix it has now got itself into. Biophysicist and novelist Thomas McMahon has called **COSMIC DAWN** "an extraordinarily ambitious and detailed book, full of beautiful epigrams, which are, in addition to being beautiful, also true. A valuable contribution to the popular literature of science."

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LITTLE, BROWN

cle motion; by pushing against the stations, the runners generate electricity), enabling you to get in one, two, even three miles on your way to work.

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What does that mean? It means that your driver is going to take you for a ride. A whole day of doing nothing but fun things! Instead of going to work or school or the dentist or the IRS, you and your companions take off on a day-long excursion. *Free!* Maybe to the ballpark. Maybe to the driver's own home for lunch and a leisurely swim. Maybe to a television quiz show where you might win an all-expenses-paid trip for two to Florida! Maybe a tour of scenic and historic points or a tour of homes of famous persons, including Gloria Mundi, who will invite the whole bunch of you in to spend the entire afternoon. And as she says good-bye to all of you, maybe she will take you aside personally and say, "You know, a famous person like myself never gets to meet real people like yourself on a one-to-one basis, and this has been a very rewarding experience for me, and I would like to see a lot more of you in the future. Don't hesitate to *call me up on the telephone*."

One morning, you'll get on the bus as usual and then suddenly you'll get carried away! Lifted up, transported to places you never dreamed you'd be going to.

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Arthur J. Vander, M.D.

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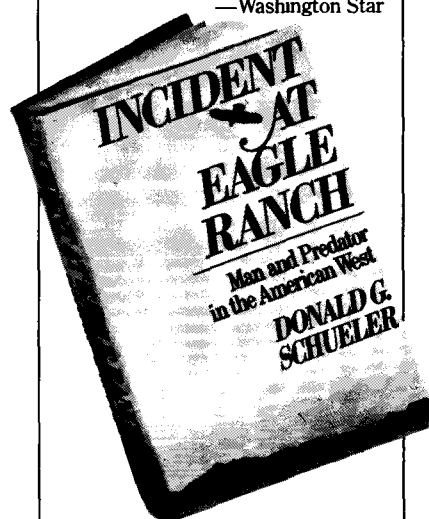
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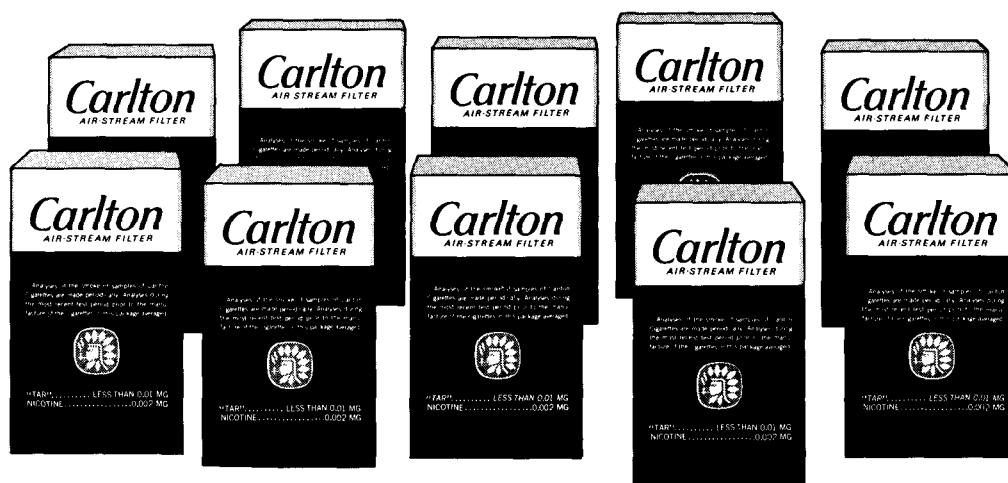


Donald G. Schueler has expanded and updated his controversial May 1978 *Audubon* article. "A fascinating story of contemporary Western Americana."—UPI

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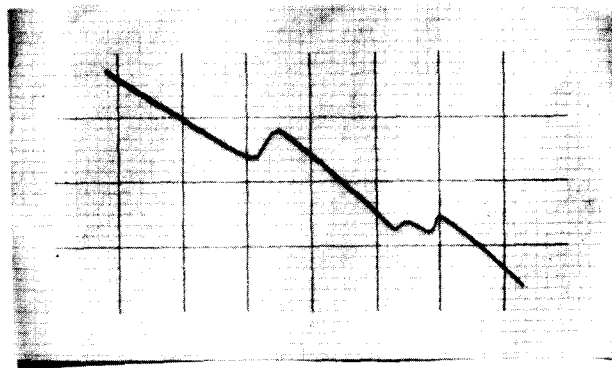
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*Million-dollar missiles, broken black boxes,  
and the phantom fleet*

## AMERICA'S HIGH-TECH WEAPONRY

BY JAMES FALLOWS

THE DISTINGUISHING FEATURE OF AMERICAN DEFENSE planning in recent years has been the pursuit of the magic weapon, the weapon that will make victory automatic, that will give ten men the power of ten thousand. American troops are said to be outnumbered; therefore, only technology will save them. The search for more exacting technical triumphs has taken on a life of its own.

The effect of this trend has been a lineage of weapons in which each generation of planes, tanks, missiles, ships, costs between two and ten times more in constant dollars than the previous one. The trend, if unchanged, will make much of the debate about defense spending moot. Constant increases will be mandatory, but no practicable amount of spending can keep up with the rise in cost. Given seemingly endless price increases, another discussion becomes urgent: How effective, how necessary are these weapons? And what do we sacrifice to own them?

These questions have special relevance in light of the Reagan Administration's proposal to increase defense spending by 16 percent between 1981 and 1982, and to devote much of the increase to expensive, complicated weapons such as nuclear-powered submarines and aircraft equipped with advanced electronics systems. The administration's proposal reflects the assumption that increasing the budget for defense without changing the underlying pattern of spending will make the nation more secure.

The story of the Air Force's Tactical Air Command gives reason to doubt that assumption. Tac Air, as it is

known, consists of those planes not designed for strategic nuclear assault on the Soviet Union. They include fighter planes, attack or bombing planes, radar planes, reconnaissance planes, radar early-warning planes, and electronic-countermeasures planes.

The forces of Tac Air represent a substantial, and growing, part of the resources we invest in defense. Over the past fifteen years, the Tac Air share of the Air Force's investment budget—the money for new equipment—roughly tripled, from 21 percent to 62. If there could be a test of the principle that more money buys more and better defense, it would be found in the history of Tac Air. What that history suggests is that ever-increasing expense, far from making Tac Air better prepared for battle, has more likely done the reverse.

The riches devoted to Tac Air have been used, with very few exceptions, to finance a progression toward ever more technically complex aircraft and weapons. The aircraft engines have been pushed toward the extremes of high internal pressure and temperature, requiring many more compressor stages and more exotic materials to withstand the tremendous heat and stress. Aluminum is inadequate for the airframe of a plane designed to travel, however briefly, at two and a half times the speed of sound. It must be strengthened by such expensive materials as titanium, stainless steel, and beryllium. The fighter planes have acquired more complex "avionics" systems, consisting of large radars to detect enemy planes and a variety of computerized "fire control" systems meant to launch guided missiles to their targets. Extremely "capable" planes—such as the Navy's F-14 Tomcat, and the Air Force's F-15 Eagle—are "all-weather" fighters, theoretically able to locate and destroy targets

*James Fallows is Washington editor of The Atlantic and author of the forthcoming book National Defense.*

at night or in fog or rain. The missiles they carry, such as the Phoenix and the Sparrow, are supposed to be able to home automatically on targets well beyond the range of the pilot's sight, and to destroy them without fail.

With each of these developments, the cost of the planes has increased. In 1980 dollars, each F-14 costs somewhere between \$26 million and \$35 million, depending on the accounting system used. An F-15 costs between \$15 million and \$25 million, compared with about \$6.5 million for a simpler attack plane known as the A-10, and about \$4 million for a simple fighter, the F-5. In the twenty-five years after the end of World War II, the cost of first-line American fighter planes rose by a factor of 100, measured in constant dollars. The force behind these cost increases has been the burgeoning of technical complexity. During the quarter-century after World War II, for example, the cost per fighter for avionics rose from about \$3000 to roughly \$2.5 million, for engines from about \$40,000 to about \$2 million.

THE MOST USEFUL DOCUMENT FOR UNDERSTANDING Tac Air is an extraordinary report called "Defense Facts of Life," which was prepared by a civilian employee of the Pentagon named Chuck Spinney. Spinney is a thirty-five-year-old former Air Force officer who now works for the Program Analysis and Evaluation office of the Department of Defense. Building on the work of one of his predecessors in that office, an engineer and analyst named Pierre Sprey, Spinney has spent the past several years studying the implications of the trend toward complex weaponry as exemplified by Tac Air.

According to Spinney's analysis, the rising cost and complexity have had an immediate effect on the numbers of planes in the force. No conceivable amount of funding, not even the comparative riches of Tac Air, could keep up with unit cost increases of 30 to 40 percent every year, so the number of planes in the inventory has decreased. In 1944, at the peak of wartime production, the United States turned out 10,000 military airplanes. In the mid-fifties, the military purchased 3000 fighters (including planes for air defense) a year. In the late seventies, about 400 fighters were purchased per year; the 1982 budget allows for fewer than 230. Since the mid-fifties, the total inventory of American fighter planes has fallen from 18,000 to 7000. Norman Augustine, a vice president of Martin Marietta Aerospace, says, "From the days of the Wright brothers through the F-18 [a current Navy fighter], aircraft costs have been increasing by a factor of four every ten years. If the trend continues," he says, "in the year 2054, the entire defense budget will purchase just one tactical aircraft. This aircraft will have to be shared between the Air Force and the Navy, three and a half days each per week."

The decline in numbers is only the first effect. The second is that each plane can be used less often than its

simpler, cheaper alternatives. In the modern Air Force, the "sortie rate"—the number of flights per plane per day—has fallen steadily with the progression toward more complicated weapons. Why? The main reason is that as an airplane or missile becomes more complicated, the probability that all its parts will be working correctly, at the same time decreases. Early in 1980, Harold Brown, then the secretary of defense, issued a paper on Tac Air that compared the reliability records of a dozen different aircraft models. One measure of reliability is the proportion of planes that are "not mission-capable"—that is, not fully ready for combat because they need repairs or lack spare parts. The "not mission-capable" rate for the relatively simple A-10 was about one third, compared with nearly two thirds for the very complex F-111D. The records showed a consistent connection between high complexity and low reliability.

Expensive and unreliable aircraft make for a dramatic reduction in what fighter pilots call "presence in the sky." A retired Air Force colonel named Everest Riccioni, who now works for Northrop, has written about the difference between the "real fleet" and the "phantom fleet." The real fleet is the one that can be put in the air at any given moment; the phantom fleet is composed of all the planes that are confined to the runway, for reasons of repair, unreliability, lack of crews. "The enemy doesn't give a damn about the phantom fleet," he says. "The only force that matters to him is the one in the air."

Riccioni demonstrates his point by comparing three representative planes: the F-5, one of the simpler aircraft now in the American inventory; the F-4 Phantom, a very large fighter of medium-level complexity; and the even larger and more complex F-15. (It should be noted that the F-5 is built by his company, but Riccioni advanced his argument about simpler planes for years while he was still in the Air Force, before he went to work for Northrop.)

The first difference, of course, is cost. By Riccioni's estimates, the F-15 costs about four times as much as the F-5 and twice as much as the F-4, so a single sum of money could variously buy:

|                |      |     |      |
|----------------|------|-----|------|
| Model:         | F-5  | F-4 | F-15 |
| No. of planes: | 1000 | 500 | 250  |

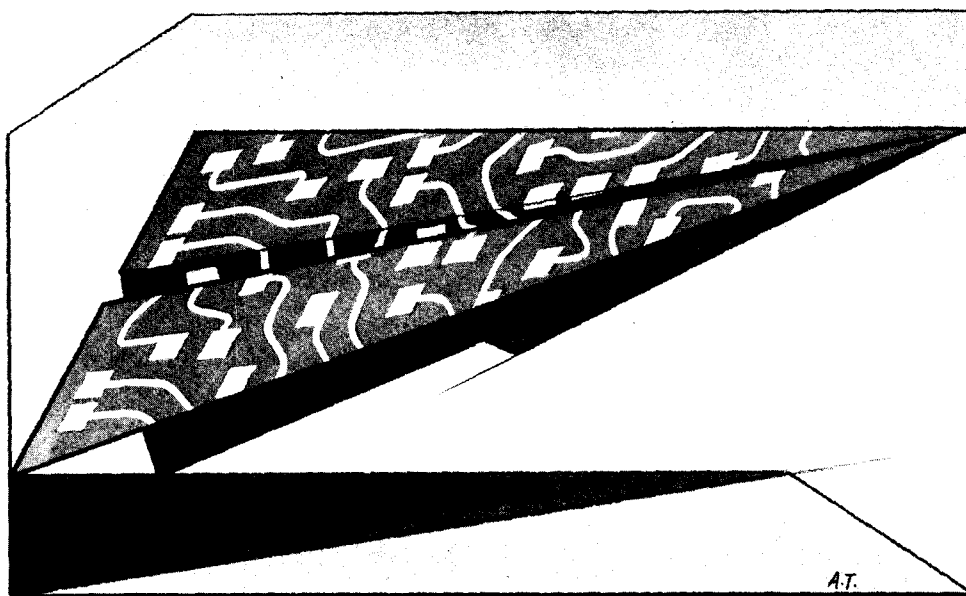
But these figures include the "phantom force." To find the real force, the number of planes must be multiplied by the "sortie rates." The rates are roughly as follows:

|              |     |     |      |
|--------------|-----|-----|------|
| Model:       | F-5 | F-4 | F-15 |
| Sorties/day: | 2.5 | 1.5 | 1    |

The product is a "real force" of:

|                        |      |     |      |
|------------------------|------|-----|------|
| Model:                 | F-5  | F-4 | F-15 |
| Planes in the air/day: | 2500 | 750 | 250  |

In short, the same expenditure, on less sophisticated



aircraft, buys four times as many planes and ten times as many sorties.

One aircraft designer says, "The typical contractor's question is, 'Would you rather go to war in an Eagle [the F-15] or an F-5?' The more realistic question would be, 'Consider a confrontation between one F-15 and six MiG-21s. Would you rather be the pilot of the F-15 or one of the six MiG pilots?'"

**H**OW WELL ARE THESE NEW, MORE COMPLEX AIR-planes adapted to the likely circumstances of combat? Each F-15 contains forty-five "black boxes"—computer systems that run the avionics and other functions of the plane. Indicators let a pilot know when one of the boxes is malfunctioning. When that happens, the offending box is removed *in toto* and a new box is snapped in. Then, in the service bays, the box is tested in another computer system, known as the Avionics Intermediate Shop, or AIS. Anyone who has worked on computers will tell you that tracking down a defect can be a maddening and lengthy process. In theory, the AIS reveals which computer card has gone wrong and needs to be replaced. In practice, the system has problems of its own. In 1979, according to Spinney, the testing system worked only 50 percent of the time; the following year, it improved to 80 percent. But even when the AIS computers are working, about a quarter of the time they yield "cannot duplicate" signals—that is, they can't find anything wrong with the box that was pulled from the plane. Such a box is generally put back on the shelf, to be tried later in a different plane.

The typical "wing" of seventy-two F-15s has six AIS computers. It takes an average of three hours, and can take as many as eight, to check one box, and each com-

puter can check only one box at a time. Thus, to support seventy-two planes—more than 3000 boxes—requires a smoothness of scheduling that is difficult to sustain even when there are no bombs falling on the hangars. As a result, "computer supportability" has become a big problem in its own right for the Air Force. Within the Air Force, there have been proposals for two large computer depots, one on each coast, that would centralize the functions of the AIS and stock the thousands of necessary spare parts. In time of need, such as wartime, a special transportation system, dedicated to this purpose alone, would ferry the computers from one air base to another. "One thing you do not have in combat is a dedicated transport system," Spinney says.

There is a similar problem in the repair of the sophisticated engines for the F-15. They are designed to make it easier for crews to pull them out and ship them to the depot than to repair them on the flight line. "It's so easy to pull an engine that they get rid of it if there's a gurgle," says an aircraft analyst. Peacetime regulations control the pulling of engines, but the rules would almost certainly be ignored in time of war, and the bottleneck would merely move from the flight line to the depot. The analyst says, "To generate sorties, you end up swamping the engine shop. It takes half an hour to pull an engine, but four or five hours in the shop to check it out, even if nothing is wrong. The whole system depends on a smooth flow, and if that's disturbed, as it would be in war, it completely falls apart." The wartime experience of the F-4 jet suggests the dimensions of the problem. The F-4 is a less complex plane, and the intensity of air combat in Vietnam was far lower than the projections of all-out war in Europe that were used to justify the F-15. Even so, during the Vietnam War the depot in Utah had a two-year backlog of battle-damaged F-4s for repair.



LAST FALL, A PUBLIC RELATIONS DIRECTOR FOR McDonnell Douglas, John J. McGrath, wrote a letter of complaint to the editor of *Newsweek* magazine. He took exception to a report that questioned the effectiveness of the F-15, which McDonnell Douglas produces. Specifically, he objected to the (accurate) statement that, in Air Force tests, three F-5 airplanes had shown that they could shoot down one F-15. "In combat exercises against many types of aircraft (all having combat ability equal to or greater than an F-5), the F-15 exchange ratio was 88 to 1," McGrath said.

This is, of course, the case for high technology. If those new planes really are eighty-eight times better, then who cares if you can put even ten times as many simpler planes in the sky for the same money? But there is another way to look at the question of "exchange ratios" and comparative "capabilities," which is to ask what the achievements in complexity and electronics add up to in combat.

Just such an analysis of the history of air combat is what Pierre Sprey undertook. Sprey is a dapper-looking man in his forties, with silver hair combed straight back and a jaunty air. He was trained as an engineer at Yale and as a statistician at Cornell, and worked for the Grumman Aircraft Corporation before coming to the Pentagon as an analyst during the regime of Robert McNamara. In 1978, as part of a celebration of the seventy-fifth anniversary of powered flight, Sprey delivered a speech at Wright-Patterson Field, in Ohio, explaining the lessons that actual combat experience might teach about aircraft design. The history of aerial combat begins with World War I and runs through Vietnam and the assorted wars in the Middle East. An analysis of that record, Pierre Sprey suggests, yields "combat-derived criteria" for a fighter airplane's success.

The overwhelmingly important criterion is *surprise*: one pilot's ability to catch another completely unawares. In the entire history of air combat, between two thirds and four fifths of all "kills" were due to the element of surprise. Surprise dominated in World War I, and in Vietnam. The most lethal "ace" of all time, the German flier Erich Hartmann, did everything he could to avoid prolonged "dogfight" engagements. He claimed that of the 352 planes he destroyed during World War II, fully 90 percent were "kills" by surprise. On the Allied side, one air commander filed a report in 1944 that might have been taken from accounts of Korea or Vietnam: "Ninety percent of all fighters shot down never saw the guy who hit them."

According to Sprey, people who know of these figures talk about tactics and alertness, but they almost never think about the plane itself. However, a number of features of a plane's design do affect the chances for surprise. A smokeless engine, for one: an F-4 fighter (the Phantom) would be visible only within a radius of five miles if its engine did not smoke, but it is visible from

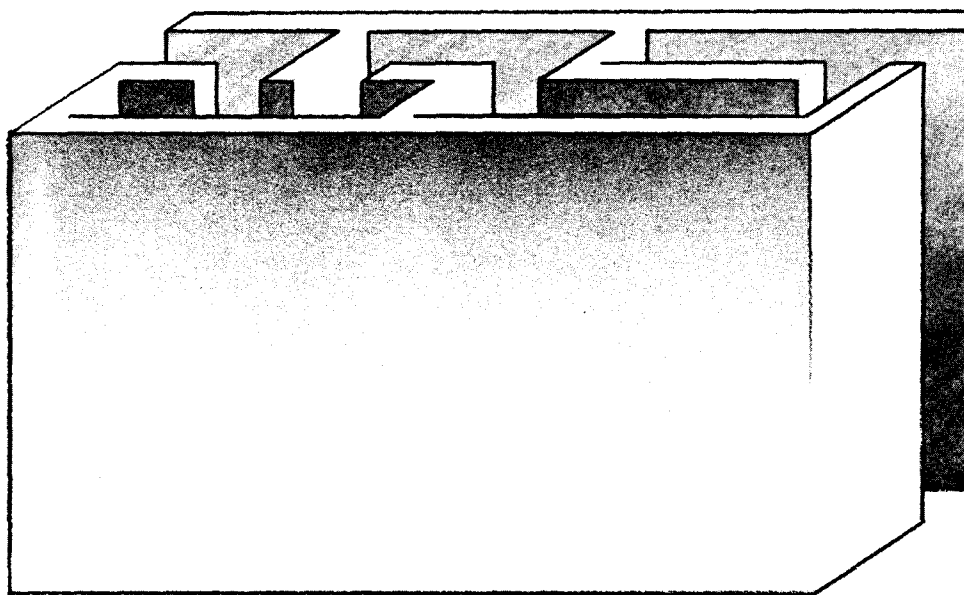
fifteen to twenty-five miles away with its usual smoke trail.

An airplane's speed also affects its prospects for surprise, but not "speed" as it is usually conceived. When the services ask for new planes, and when congressional committees hear about the need to counter the Soviet threat, the speed discussed is nearly always the plane's maximum speed. A Mach 2.5 fighter is one that can use its afterburners to reach 2.5 times the speed of sound (roughly 1900 miles an hour). But because afterburners consume fuel at a tremendous rate, pilots can sustain those top speeds for only a matter of seconds. The usual saying is that a plane will reach Mach 2 just in time to run out of fuel. (Indeed, several of the American fliers who ended up as prisoners of war in North Vietnam were captured because they ran out of fuel while chasing MiGs at Mach 1.6.)

The speed that does matter in combat, Sprey suggested, is cruising speed, "the speed that will let you fly long enough to do what you want to do to the enemy." When one plane has a speed advantage over another in combat—enabling the pilot to sneak up behind the other plane's tail, and avoid others' sneaking up on his—the advantage consists of the difference between the cruising speeds of the two planes. In both old and modern jet fighters, these are usually below the speed of sound, and far below the top speeds for which the planes have been so carefully designed and expensively produced.

If surprise is so important, Sprey continued, it also holds implications for the proper electronic equipment on a plane, implications that run directly counter to the prevailing wisdom employed in more "capable" planes. Modern radar and "fire-control" systems are intended to give the plane "all-weather" and "beyond-visual-range" capabilities, which so far have not proven usable in combat. "All-weather" means the ability to detect other planes at night, in clouds, in storms; "beyond-visual-range" means the ability to discern enemy fighters from many miles away and target guided missiles to destroy them. What these calculations ignore, Sprey said, is that the other plane is looking for you, and these same radar systems serve as giant beacons, alerting any other plane in the region to your presence. If other planes are equipped with a "radar-warning receiver" (a "fuzz-buster"), their pilots are quickly aware of someone beaming radar toward them, and of the direction from which it comes. The price of this radar, then, is the element of surprise. And for what? In Vietnam as in all other recent wars, the great majority of "kills" were based not on radar detection but on the pilot's visual observations.

As one Air Force veteran says, "Imagine yourself holding a gun and a flashlight in a pitch-dark room, with a lot of other guys with flashlights and guns. Who's going to turn on his flashlight first? Well, radar is that flashlight."



**T**HERE IS A FINAL, EXEMPLARY LESSON TO BE DRAWN from Tac Air. The real message of Chuck Spinney's analysis, which is one of the most significant documents in modern American defense, is that unrealistic military planning, which chronically pays too little attention to the economic and military effects of complexity, constitutes a "form of organizational cancer." The pattern, in essence, involves four steps.

First, the planners are eternally optimistic about the amounts of money they will be able to spend to buy new equipment. Year after year, the long-range spending plan predicts a smooth, steady increase in funding for the five years that are about to begin. These predictions, in turn, shape decisions about the kinds of weapons to buy. That is, the military might decide to build a new, complex fighter plane in the belief that it can purchase 1500 of them, even though it would never choose that plane if it knew in advance that it would be able to afford only 500. Although the past teaches the unpredictability of military budgets, the plans are made as if the future were assured.

Second, in their desire to buy more equipment for the force, the planners forget or fool themselves about how much money they need to set aside for "operations and maintenance" (known as O&M) of new equipment, especially the more complex varieties. For example, Spinney points out that in 1968, Secretary of the Air Force Harold Brown endorsed a new avionics system for the F-111D, saying that, despite its complexity, it would be extremely reliable. He predicted that the system would go 60 hours between breakdowns (technically, "mean time between failure"), and that it would require less than 1.5 man-hours of maintenance per sortie. In 1980, the system went about 3 hours between breakdowns, and averaged 33.6 maintenance man-hours per sortie. That is, it required

about twenty times as much maintenance as predicted on both counts.

Third, as a natural consequence of the second step, the military has to make unexpected cuts in its "investment" budget—the money it has set aside for new equipment—in order to make up the cost of maintenance and overruns on previous programs. No matter what the weapons system, whether ships, planes, helicopters, or missiles, the military ends up buying a smaller number than it originally projected, simply because it doesn't have the money to buy more. This means, among other things, that the cost for each plane or ship is much higher than expected, since the overhead is spread over a smaller "buy."

Fourth, when certain parts of the military do enjoy momentary prosperity, they tend to use the money not to bail out the projects they have already started but to get yet another complex system, with yet another inadequate maintenance budget, under way. This, of course, is much of the story of Tac-Air.

"In a general sense, this pattern reflects a tendency to reduce our current readiness to fight in order to modernize for the future," Spinney says in his presentation. "However, because of rising operating costs, the price of even *low* readiness is rising inexorably over the long term. . . . This pattern of behavior can be expected to continue as long as costs, particularly operating costs, grow faster than the budget."

**A**T LEAST ONCE IN RECENT HISTORY, THE MILITARY tried a different road. In the early seventies, the Air Force launched its Lightweight Fighter Prototype Program, which led to the development of today's F-16 airplane. A group of free-thinkers known as "the Fighter Mafia"—which included Pierre Sprey, Everest

Riccioni, and an Air Force colonel named John Boyd, who had almost single-handedly developed the modern theory of aerial combat—used their technical arguments and their bureaucratic skills to build support for a small, light, inexpensive, and highly maneuverable plane.

Unlike the elaborate design specs of the standard Air Force project, the succinct requirements for the Lightweight Fighter called for no maneuvers at speeds above Mach 1.6. Instead, they set loose goals for a plane that could out-accelerate, out-turn, and out-endure any existing aircraft in the range of speeds actually seen in combat—about Mach .6 to Mach 1.6. With these general instructions, private manufacturers were left to develop prototype aircraft, which would prove their merits in competitive “fly-offs” against other prototypes. David Packard, who, as deputy secretary of defense, had been one of the strongest partisans of prototyping, spelled out the new philosophy in a memorandum early in 1971:

It is important that each program have these features:

1. . . . Only the *price* shall be firm. All specifications shall be open.
2. At least two projects should be authorized for each class of plane.
3. A plan for fly-off testing will be required.
4. It must be made clear that there is no commitment to go ahead with a further program.
5. At the same time, we will lose benefit of this approach if, after a fly-off, we go back to some other competition for full development and production. In other words, the fly-off testing is the source selection if we decide to go ahead.

After a number of intricate fandangos, involving Northrop's ambitions for foreign aircraft sales and an abortive proposal for a small fighter from “Kelly” Johnson, a world-renowned designer at Lockheed who had conceived the U-2 and SR-71 spy planes, the development of prototypes finally began. The two manufacturers involved, Northrop and General Dynamics, did produce prototypes that embodied the virtues of lightweight fighters that the Fighter Mafia had long been touting. The winner, a General Dynamics product known as the YF-16, was, in the eyes of the Mafia, the greatest fighter since the F-86. It weighed about 20,000 pounds and carried only a simple aerial cannon, Sidewinder missiles, and their fire-control systems. Through the fly-offs, Sprey had kept looking for ways to take extra weight out of the plane, and Boyd had reined in all attempts to move away from actual flight data to computer analyses as the standard for evaluating the competitors. Because it was so light (and therefore could accelerate and turn quickly), the plane could fly circles around other planes, including the F-15. Because it was so small and so hard to see, either by eye or by radar, it maximized the advantage of surprise. Its projected cost was about half that of the F-15. James Schlesinger, by then the new secretary of

defense, had taken on the Lightweight Fighter as one of his own projects, and he was well pleased with the result of the fly-offs. He decided to proceed with production, and he persuaded both the Air Force and the Congress to go along. General Dynamics won the contract.

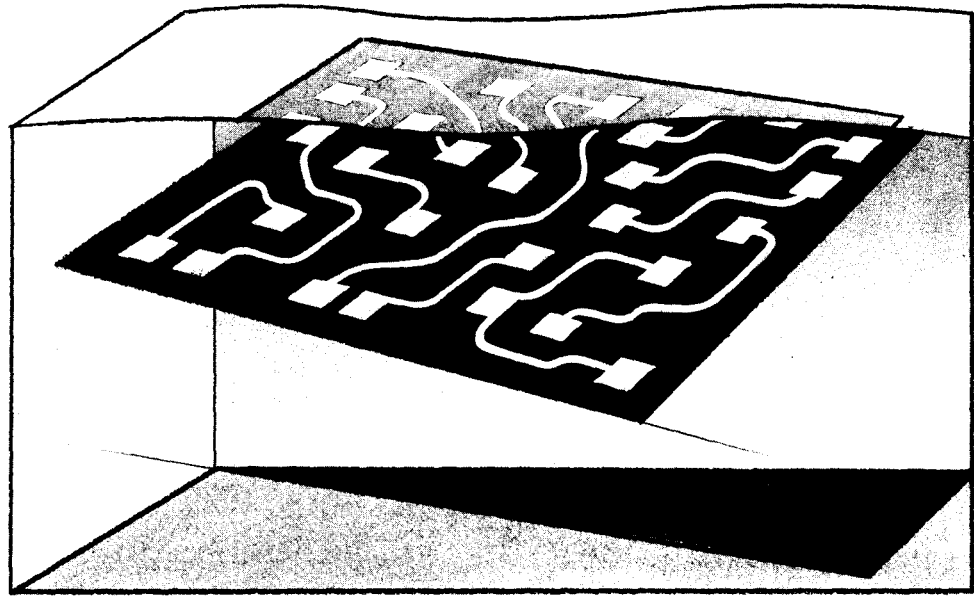
Before the YF-16 could go into production, it fell back under the domination of the Air Force's development and procurement bureaucracies. Under the supervision of General Alton Slay, the head of the Air Force's Configuration Control Committee, the plane went into “full-scale engineering development,” which amounted to modifying the blueprints, adding the technical specifications that had been so deliberately avoided up to this point, and loading roughly two tons of new electronic equipment and other modifications into the plane. This stage represented nothing less than the rejection of the entire philosophy under which the plane had been designed. Some twenty-five members of the Air Force had managed the development of the prototypes and the competitive fly-offs. Now the Air Force management group grew toward 200 people, and the contractor's team rose from 150 engineers to about 1500.

The “Fighter Mafia” was outnumbered and outflanked, and Secretary Schlesinger, who had been the plane's early champion, chose not to fight the thousand battles that would arise as the Air Force added one specification after another. The plane's mission was redefined: instead of being a pure fighter, it was converted into a “multiple-mission” airplane, to be used for attacking ground targets and dropping nuclear bombs. The structural and electronic changes justified by these new missions raised the F-16's cost and degraded its performance as a fighter—conveniently reducing its status as a competitor of the Air Force's favorite fighter, the F-15.

The result was an aircraft that cost 75 percent more than the YF-16 would have; that is being fielded in units with air-to-ground missions rather than pure fighter units; that weighs roughly 24,000 pounds instead of roughly 20,000, with a proportional reduction in acceleration; and that comes loaded with hard-to-maintain electronic equipment. Nonetheless, it was a better aerial fighter, by all the combat standards Pierre Sprey laid out in 1978, than any other the United States or the Soviet Union had built in thirty years. In aerial exercises, F-16 pilots, with passive radar systems, detect F-15s as quickly as the F-15s, with their overpowering radar systems, can detect them. In NATO exercises, Belgian pilots in F-16s have soundly beaten U.S. pilots in the Eagles, which cost more and can fly less frequently.

THE STORY OF TAC AIR IS THE STORY OF MUCH OF the rest of the Pentagon. In nearly every weapons system, designers have pushed technology as the solution to American military problems, without distinguishing between the innovations that simply breed





extra layers of complexity and those that represent dramatic steps toward simplicity and effectiveness. As a result, the cost of military equipment keeps going up, the number of units in the inventory goes down, and the reliability of each unit becomes open to serious question.

The Army's latest tank, the XM-1, costs at least seven times as much as the Sherman tank of World War II. (All comparisons here are in constant dollars.) The Main Battle Tank—a proposal from the early seventies that was junked because of technical problems and resistance from Congress—would have cost ten times more than the Sherman. Modern aircraft carriers, with their nuclear propulsion, cost four to five times as much as those built at the end of World War II. The first guided missile used for aerial dogfights, and still the most reliable, is the heat-seeking Sidewinder, which originally cost about \$3000 apiece, or about \$10,000 in today's dollars. Its less reliable, radar-guided competitors, the Sparrow and the Phoenix, cost ten and one hundred times as much respectively. (The latest model of the Phoenix costs more than \$1 million.) The nuclear-powered attack submarines, whose creation Admiral Hyman Rickover oversaw, are different from other complex weapons, in that they work. But at roughly \$300 million apiece, the Navy can buy only one fourth as many of them as of diesel-electric subs.

As with Tac Air, the progression toward higher and higher costs degrades real military readiness in two ways. The first is simply that it diverts resources. When so much money goes for computers and complex engines, there is less for training sessions, extra rounds of ammunition, realistic preparation for combat. The "Command-Control-Communications-Intelligence" networks, in which the military now invests so much effort and money, illustrate the problem. The "cee-cubed-eye" systems,

as they are known (in written form, it is "C<sup>3</sup>I"), are radio and computer hookups designed to carry out the dream of controlling military maneuvers from one central point. To that end, the military has invested somewhere between \$10 billion and \$15 billion in the Worldwide Military Command and Control System (or WWMCCS, pronounced "wimmex"). Another network, called the Joint Tactical Information Distribution System, or JTIDS, is designed to feed information from one computer to another on the battlefield. From a technical standpoint, even the partisans of C<sup>3</sup>I will admit that, yes, there are still a few bugs in the system. Once or twice a month, the newspapers carry a story about the WWMCCS computers breaking down. When the system was thoroughly tested in 1977, attempts to send messages ended in "abnormal terminations"—that is, breakdowns—62 percent of the time.

The wild expansion of C<sup>3</sup>I also undermines the very qualities of leadership and initiative that are essential to success on the battlefield, since officers must operate in time of crisis with a commander looking over their shoulders from miles away. Nonetheless, since 1977, there has been an assistant secretary of defense charged with no responsibility other than promoting C<sup>3</sup>I. He has been so successful that the United States is now spending billions of dollars on centralized command networks that are useless when they don't work and may be actively harmful when they do.

In addition to consuming resources, the costly and complicated systems harm military readiness in another way: by making it too costly, or too impractical, for soldiers to spend much time in realistic training. For example, John Fialka has reported in the *Washington Star* that the Army's gunners who are stationed in the front-line areas of Europe and Korea, where they would pre-

sumably be charged with stopping the Soviet tanks with TOW ("tube-launched, optically tracked, wire-guided") missiles, get to fire at most once a year with a live round, which now costs \$6000.

The question must be asked, here as with the complex airplanes, do the virtues of "advanced" systems offset these drawbacks? In general, the answer is no, because in designing more "capable" weapons and dreaming of the advantages they will bring, planners usually avert their eyes from the confusion that is the only certainty of war.

The Rapid Deployment Force planned for the Middle East would, as George Wilson of the *Washington Post* has pointed out, most likely encounter its greatest difficulties not in enemy aircraft or tanks but in figuring out how to find enough water to keep its equipment functioning and its men alive for more than about one day. In the Saudi desert, each soldier and his supporting equipment would require about twelve gallons of water a day. A GI canteen holds one quart. The engines of a KC135 tanker plane must be injected with 670 gallons of distilled water each time they are started up. The military planners Wilson interviewed said that it was impossible to carry enough water onto the scene, and difficult to imagine distilling it from seawater on the spot.

The real challenge comes not from hostile environments but from adversaries who can alter their behavior. A colony of bacteria will not change its tactics to avoid detection by a scientist looking through a microscope, nor will a gravitational field plot to disrupt the plans of builders erecting a skyscraper. An army will try to fool its enemy's weapons, and will try hardest against those that actually begin to work.

All "precision-guided" weapons depend on sensors to home on their targets or to direct them to a desired path. All the sensors depend on making mechanistic, yes/no comparisons to distinguish the target from its surroundings. Infrared sensors choose between hot and cold; radar guidance measures the relative strengths and frequencies of waves reflected from the target and the background; some systems use television cameras to search for black/white contrasts in the target images. The sensors will fail if they have to deal with small differences between the target and its background—and such small differences are what soldiers instinctively strive for with camouflage. When the "smart" missiles went to Vietnam, most of them were flops. One of these, the Falcon, had been produced at a cost of \$2 billion. On paper, its predicted "probability of kill," or Pk, was 99 percent. In combat, it was effective about 7 percent of the time, only slightly less than another "smart" missile, the Sparrow. Eventually pilots refused to carry the Falcon on their planes.

The most highly touted prospect in today's catalogue of high technology is "millimeter-wave" radar guidance, a process that will supposedly enable each missile to tell a tank from a car and an artillery piece from a rock, and to

pick out, with pinpoint precision, the targets it was programmed to destroy. According to optimistic predictions from the Pentagon's Research and Engineering officials, these weapons could be launched in a swarm over a battlefield, and could then be relied upon to fly around, spot Soviet tanks, and track them down to certain death. "What would I do if I were on the other side, and those things started to work?" asks one Pentagon official skeptical of the approach. "I'd get a bunch of corner reflectors [devices that send back disproportionately strong radar reflections] and put them in a lake, or mount them on a bunch of motorcycles going the other way. You'd see the missiles take out after them."

LAST SUMMER, A MAJOR STORY ABOUT THE AMERICAN military appeared in *Business Week*. Its title was: "The New Defense Posture: MISSILES, MISSILES, AND MISSILES." The story concerned projects in an increased defense budget. It quoted at length from Norman Augustine, whose warning about the dramatic rise in the cost of military airplanes was cited earlier. Augustine is a former assistant secretary of the Army for research and development who, in a pattern typical of such officials, had left to become a vice president of Martin Marietta Aerospace, producer of the Army's Pershing, Patriot, and Copperhead missiles. Shortly after the *Business Week* article was published, he became chairman of the Defense Science Board, a Pentagon advisory group. One section of the story, which begins with a discussion of a missile called Maverick, is unusually useful for understanding modern defense. Not only does it indicate the effect on weaponry of the high-technology juggernaut but it suggests how the longing for magic weapons has done so much to pervert the proper functions of defense.

Maverick went into development 10 years ago as an electro-optically guided missile that carried a tiny television camera in its nose. The theory was that its camera would photograph a potential target, and the missile would then lock onto it. But the camera did not work well in clouds or at night. So, three years ago, the Air Force turned instead to the development of an infrared guidance system for Maverick.

The infrared device helped make Maverick an all-weather missile, but it also left a lot to be desired. Its sensors spotted targets imprecisely, and its signal-processing computers were too often uncertain about where to steer it. Sometimes the hot spots it saw turned out to be flares fired as decoys. Because it did not see full shapes or images, Maverick still could not distinguish among real and spurious targets well enough to make it a truly one-shot weapon. . . .

But the air-to-ground Wasp and a new missile called AMRAAM (for advanced medium-range air-to-air missile), now in development, should be vastly better systems.

Embodying the latest in miniaturized electronic components, large-scale integrated circuitry, and minicomputers for signal processing, the new missiles will pack many thousands of times more computing power and sensory capacity than did their predecessors. Such advances in electronics will permit the missiles to see whole shapes of targets and select the right ones to hit.

"We're beginning to see seekers that make a list for their signal-processing computers as they fly," says Martin Marietta's Augustine. "They say, 'I see a tank, a bridge, and an armored personnel carrier.' The computer is programmed to kill tanks, so it chooses the tank as its first-priority target."

Augustine predicts that by the end of the decade, the computers in missiles will come very close to comparing with the human brain. "Our missiles," he says, "will be not just smart, but brilliant."

In its tone and outlook, this could have been any account of any exciting new weapon developed in the past twenty-five years. The voice of realism is heard in its description of now-antiquated systems of recent history. They didn't work quite right: the clouds got in the way; the sensors were fooled by flares. The voice of hucksterism is heard in the predictions. Yes, you had problems before, but wait till you see these brilliant new items.

What makes this passage so valuable is that it illustrates both sources of the pressure that pushes the military inexorably toward more "advanced" and more expensive weaponry. One is the force of seeming logic. In this category are the extreme battle scenarios that call for wonder weapons as the only appropriate response; the technical visions of how easy and automatic warfare might be if new inventions work out; and the argument that American forces are "outnumbered," and must therefore exploit their advantage of high technology. The natural corollary of this reasoning is tolerance for rising cost and a lack of interest in the tiresome business of seeing which weapons actually work. The other major force is that of primitive self-interest. A culture of procurement has been created in the Pentagon that draws the military toward new weapons *because* of their great cost, not in spite of it.

ON ITS RATIONAL SIDE, MODERN MILITARY PLANNING recalls that technical changes have repeatedly altered the nature of war. In World War I, the machine gun gave an edge to forces on the defensive; twenty years later, the tank restored the dominance of maneuver and attack. In 1937, the U.S. government commissioned a study on "Technological Trends and National Policy." Among the developments its experts failed to foresee were the military applications of helicopters, jet engines, radar, computers, nuclear weapons, missiles, satellites, and nuclear submarines. Thus, the U.S. can scarcely afford to overlook any avenue of research.

It is also possible to argue, on paper, that certain hypothetical situations cry out for special new weapons. What would happen, for example, if several aircraft carriers operating off the coast of Africa were attacked by Soviet "Backfire" bombers firing missiles from a hundred miles away? Or what would happen if the Soviet Union, in addition to destroying all the nuclear missiles that lay buried in American silos, also figured out how to destroy the submarines and bombers that carry four fifths of the total American nuclear arsenal? What if you want to be sure not only that the different elements of your nuclear system together constitute an invulnerable deterrent but also that each element, on its own, could survive any conceivable attack? Speculation of this sort leads directly to the MX missile.

In addition to hypothesizing threats, such speculation can run to marvelous fantasy-life solutions. Wouldn't it be great to have a tank that went from zero to 60 like a hot rod? What if we had a missile with a 99-percent "probability of kill," or one that would give American forces a 955-to-1 exchange rate against Soviet aircraft? (Such claims were actually made for one recent missile.) What if we could build an electronic "fence" across Vietnam and Laos to keep all the Communists out? Wouldn't it be wonderful if, instead of leaving aerial combat to a group of pilots trying to figure out for themselves which enemy planes to destroy, the whole enterprise could be automatically controlled from the ground? If you had a huge radar-computer complex, it might be able to identify all the "friendly" and "enemy" planes in the sky and rationally distribute assignments to the former for shooting the latter. Then it could transmit commands to each fighter plane, guiding it precisely to its target. Visions of this sort lay behind a \$20-billion radar complex of the sixties known as SAGE—which, after countless revisions, finally foundered, because of the technical complexity of devising a computer program that could keep the friendly and enemy planes straight. Nonetheless, the Air Force and the Navy have invested further billions in radar planes known as the AWACS and the E-2, which face the far greater technical challenge of performing similar electronic feats from a single plane in the air.

Running through all arguments in favor of high technology is the idea that the United States really has no choice: since we are a modern nation, "quality," not "quantity," is the obvious way to go. "Given our disadvantage in numbers," Harold Brown has said, "our technology is what will save us." Most Americans probably understand this above all other concepts about our armed forces; which is unfortunate, because the concept is wrong—not wrong in the sense that American Seabees should attempt to build airfields with hand tools, as do the Chinese, but wrong in its implication that high technology always, or even usually, increases the military usefulness of a weapon.



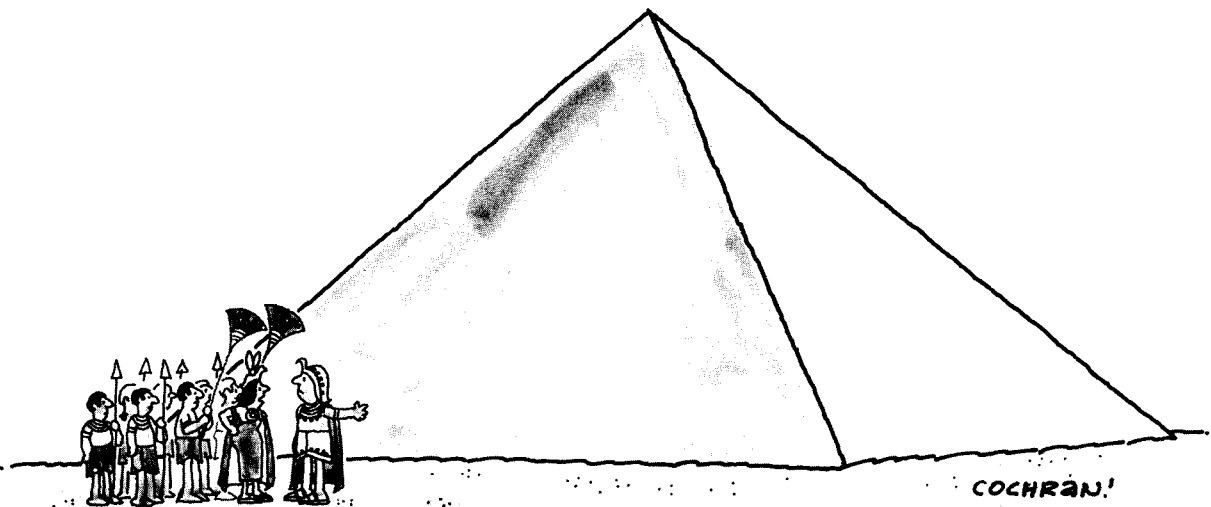
The "we are outnumbered" argument is also wrong in concealing the fact that if the United States has fewer tanks and planes than the Soviet Union, it is because American planners have chosen to build fewer. There may be a parallel in the "throw weight" question in nuclear weapons. American nuclear strategists consciously decided that, instead of following the Soviet pattern of building large, heavy, nuclear-armed missiles, they would concentrate on lighter, smaller missiles, by exploiting American technological advances in accuracy, warhead design, and propulsion systems. Yet, when it comes time to compare U.S. and Soviet forces, they complain about the ominous Soviet advantage in throw weight, i.e., how big a load the missile can lift. In conventional weapons, American planners keep pushing at the frontier of technological complexity—and then complain that since we are falling further and further behind the Soviet Union in numbers, we must push the frontier further still.

If being outnumbered is really the problem, why not solve that problem directly? The Soviets now add about 500 tactical fighters to their force each year, compared with our average of 250. If a sensible plane could be built for \$5 million instead of \$25 million to \$35 million, then it would cost about \$2.5 billion to match the Soviet output. Are they building 2000 tanks a year, to our 1000? If planners concentrated on building a tank for \$800,000 instead of \$2 million, then it would cost \$1.6 billion to match the Soviet output, and \$3.2 billion to double it. These are not trivial sums, but they are hardly in the same league with prospective total procurement budgets. One nuclear-powered aircraft carrier and its escorts cost about \$6 billion. For the same money, we could easily eliminate the entire

Soviet advantage in production of fighter planes and tanks.

In addition to making the military tolerant of ever-rising costs, the logic of "advanced" weaponry has several other effects on the internal priorities of the Pentagon. For one thing, it makes planners far more interested in paper projections of how a weapon should work than in reports of how it actually performs. Much of the weapons-procurement system is designed precisely to shield projects against unflattering data from the field. Cripples such as the "smart" missiles are nursed toward survival, their problems regarded as mere growing pains that do not blemish the ultimate potential of the weapons. The emphasis on paper projections also tempts planners to show more passion for making weapons conform to their own regulations than for shaping them to perform in combat.

Further, the wonder-weapon mentality generates hostility to small, sensible steps that will not revolutionize the battlefield but will do some good tomorrow. Hand-held calculators, the reliable \$6 kind, might be a big help to artillery men. Instead, the Army has the TACFIRE system, a huge, cumbersome, unreliable, and quite vulnerable computer designed to control artillery. Richard Garwin, a physicist who works at IBM and Harvard and has long served on the Defense Science Board, suggests that the United States might look more closely at the wartime use of mines, for example, to help slow the Soviet fleet's passage through the "Greenland-Iceland-UK gap" between their home ports and the open sea. "But no one can command a mine," he says. "You don't get promoted for procuring them. There's no glamour to them."



"It's too pointy."

THE FORCE OF LOGIC, AND OF TORTURED LOGIC, GOES only so far in explaining the trend toward costly, complex weaponry. The real reason that American forces are "outnumbered," and that high technology is king, lies in the very nature of the Pentagon, in the culture of procurement. In thirty years of peacetime operation (including Vietnam, since almost no one except the soldiers ever viewed it as total war, in which the weapons and strategies *had* to work), the central function of the military has been perverted. Yes, the Pentagon is in business to devise war plans and understand the enemy and protect the nation; but before any of those things, it is in business to spend money. Many people have come to recognize this reality of bureaucratic self-interest as it applies to, say, the Department of Housing and Urban Development. Indeed, many of the voices that are now crying most stridently for "more" defense belong to those "neoconservatives" who have shown an acute understanding that employees in the Office of Economic Opportunity may sincerely want to help the poor but will fight poverty less fiercely than they will fight a threat to their programs or their jobs. Why can't the conservatives, neo- or otherwise, see the same thing in the Pentagon? Between 1977 and 1979, the catch phrase for America's most urgent military priority shifted from "NATO modernization" to "rapid-deployment force." The purchases that the services listed as "essential" to carry out these very different missions were virtually the same.

This is corruption, but not in the sense most often assumed. The bribes, the trips to the Caribbean in corporate aircraft, do occur, but they distort the essence of the problem. The real damage is not spectacular but routine: it is the loss of purpose in the daily operation of the military machine, the substitution of procurement for defense. It affects all the relevant groups: soldiers, who are converted into sales agents; contractors, whose productive core is corroded; and finally, the rationality and civility of public discussion about defense, which are sabotaged by the hidden purpose of continuing to spend money.

When veterans of the defense business—the ones with "dissident" tendencies, the kind in any organization who stop to look carefully at things everyone else takes for granted—reach the point where they want to move beyond the details to explain what *really* troubles them about defense, it is always this theme they emphasize: the corruption of military purpose by procurement. Consider the comments of Dr. Thomas S. Amlie, who worked for nineteen years at the Naval Weapons Center at China Lake, California, and became its technical director: "There is no amount of money, even exceeding the GNP, which could redress the unbalance between Soviet and American force structures unless fundamental changes in the organization and its operation are made . . . We could have significantly better defense for three quarters of the present budget. The basic reason for the problem is

incredibly simple and will be incomprehensible to anyone who has not spent time in the system: there is no profit and loss sheet. Thus, there is no competition and incentive to produce. The goal of every good bureaucrat is to get an exclusive franchise on what he is doing. If nobody else is doing it, no one can measure how well or poorly he is doing it. If he supervises more people, his grade level goes up. The only requirements are to stay busy, generate paper, and make no mistakes. The reader tempted to criticize this behavior is invited first to imagine himself in this situation, complete with a large mortgage and children in college.

"Nobody cares much what is bought so long as the money gets spent . . . The DOD has all the symptoms of being corrupt, incompetent, and incestuous, and is so to an alarming degree. This is not because of some sinister plot but because the present structure forces millions of players to act like rational human beings and do what is necessary for their survival or perceived best interests. Many of the players are aware that things are going badly and are unhappy they do not have meaningful jobs where they contribute. They are not, in the main, dishonest or incompetent, just caught in a very bad situation. All pressures are to maximize mediocrity . . . To the large extent that the DOD performs non-competitive procurement, it forces the industry into the same habits. Indeed, the larger corporations have to separate those divisions which do business with the government from those in the competitive market because of the corrupting effect of government procurement policies and practices."

The culture of procurement teaches officers that there are two paths to personal survival. One is to bring home the bacon for their service as the manager of a program that gets its full funding. "Procurement management is more and more the surest path to advancement" within the military, says John Morse, who retired as a Navy captain after twenty-eight years in the service.

The other path opened by procurement leads outside the military, toward the contracting firms. To know even a handful of professional soldiers above the age of forty and the rank of major is to keep hearing, in the usual catalogue of life changes, that many have resigned from the service and gone to the contractors: to Martin Marietta, Northrop, Lockheed, to the scores of consulting firms and middlemen whose offices fill the skyscrapers in Rosslyn, Virginia, across the river from the capital. In 1959, Senator Paul Douglas, of Illinois, reported that 768 retired *senior* officers (generals, admirals, colonels, and Navy captains) worked for defense contractors. Ten years later, Senator William Proxmire, of Wisconsin, said that the number had increased to 2072. In the ten years after that, at least 1455 more senior officers joined the contractors.

J. Ronald Fox, a former assistant secretary of the Army, has said of this process: "The availability of jobs in

industry can have a subtle but debilitating effect on an officer's performance during his tour of duty in a procurement management assignment. If he takes too strong a hand in controlling contractor activity, he might be damaging his opportunity for a second career following retirement. Positions are offered to officers who have demonstrated their appreciation for industry's particular problems and commitments."

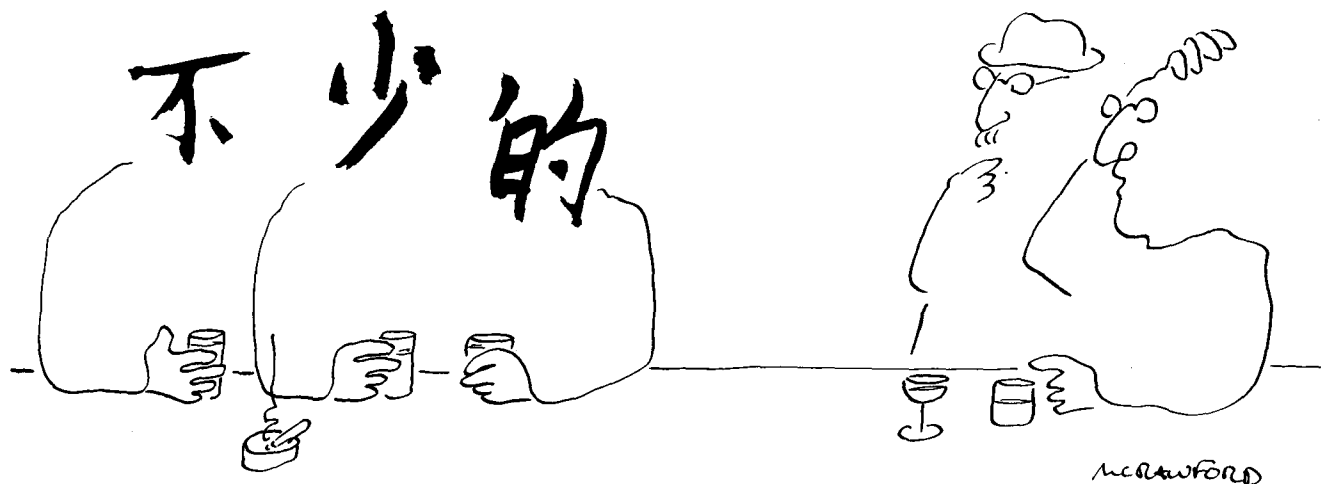
Thomas Amlie says: "The military is a closed society that takes care of its own. If a retired general representing a client goes in to see an old classmate still on active duty, he will get a very attentive hearing. The officers on active duty are also thinking ahead. Fighting the system gets one blackballed, and then future employment prospects are bleak. In this way the industry has come to control DOD even more than its political appointees. This control is acquired with relatively little money and, to add insult to injury, the industry uses government money to get control of the government. As in the case of the civil servant, there is no vast and sinister plot: the system grew that way because nobody was in charge or cared."

The money at stake is of course considerable. In 1979, for example, ten companies each did more than \$1 billion worth of business with the Pentagon. The leading firm, General Dynamics, which makes the F-16 and F-111 airplanes, the Tomahawk cruise missile, and nuclear submarines, held contracts worth \$3,492,100,000. The next, McDonnell Douglas, which makes F-15 and F-18A fighters and Harpoon missiles, had \$3,229,200,000. United Technologies, which makes helicopters and jet engines, among other things, received \$2,553,600,000. Until the beginning of the Reagan Administration, the president of United Technologies was Alexander Haig—former

four-star general, former Supreme Allied Commander of NATO forces, current secretary of state, and perhaps the most dramatic single example of the traffic between defense contractors and the government. The other companies in the top ten were General Electric (jet engines, nuclear warheads, etc.), \$2,042,500,000; Lockheed (large transport planes), \$1,796,600,000; Hughes Aircraft ("smart" missiles such as the Falcon and the Phoenix), \$1,556,900,000; Boeing (cruise missiles, B-52 bombers, Minuteman nuclear missiles), \$1,514,500,000; Grumman (F-14 fighter and other planes), \$1,364,200,000; Raytheon (Sidewinder, Patriot, Hawk, and other missiles), \$1,249,400,000; and Tenneco (shipbuilding), \$1,092,600,000.

After the election of Ronald Reagan, the contractors announced that those sums were sure to soar. Defense stocks led the rally on the stock exchange after the election; Raytheon went from 85 before the election to 102 $\frac{1}{4}$  one week after, Rockwell International from 30 $\frac{7}{8}$  to 42 $\frac{1}{2}$ , McDonnell Douglas from 34 $\frac{5}{8}$  to 42 $\frac{5}{8}$ , and General Dynamics from 59 to 77 $\frac{3}{4}$ . If the new administration decides to approve the B-1 bomber, that would mean some \$10 billion for Rockwell. Boeing has recently received a \$2-billion contract for cruise missiles. Northrop is trying hard to sell its F-5G fighters to the foreign market, on the theory that \$5 billion of business may await it there. The list could go on and on.

IF THE MOST OBVIOUS THING ABOUT THIS LIST IS THE size of the sums involved, the most interesting aspect is that such huge contracts generate comparatively little *profit*. They generate a lot of business; also jobs, political influence, support of overhead, and cash flow.



"Oh, no. Not those characters again."



Still, defense contracts by and large create a lower profit level than normal commercial business. Partly, that is by definition: much defense business is on a cost-plus basis, which means that the contractor states his costs and adds a standard markup. A great deal of hidden profit is certainly buried in the "cost." But more, the lower profit rates reflect the fact that exposure to the soft world of cost-plus contracting and sky's-the-limit specifications corrupts even the industry that is its most obvious beneficiary. Corruption in this case means eroding the disciplines of efficiency, innovation, and sound business practice that are, in the long run, essential to the firms' survival. American firms—bowing to the book-length specification lists for new military projects, the cadres of retired officers they have taken aboard to generate business, and the line-by-line scrutiny of designs practiced by the Congress—suffer from inefficiency in direct proportion to the willingness of the Defense Department to pay their bills. Charles Bernard, an official in the Research and Engineering office of the Pentagon, says, "The U.S. [defense] industry has a lot of dilettantes in it—guys who are aircraft designers one day, torpedo designers the next. You'd say that's impossible, but I've seen it. Guys with zero experience in something would get interested, write a brochure, get the contract, and then figure out what the hell to do."

"What we've lost in this process is the discipline of the project engineer. If you hired an architect for a building, you'd let him draw the plan, let him supervise the work, and then hold him responsible for the results. If you ask who the 'architect' is for most defense projects, you won't find one. All they have are 'program managers,' who don't know squat about weapons."

"To give you an example. The Sidewinder is the best air-to-air missile we've ever had. It was developed in the fifties, and we still have it. It was the product of one engineer, Bill McLean. There was a man obsessed with simplicity. He was *one guy* making sure that the system didn't go out of control. Today we'd break it up into 'interface managers' and 'engineering groups.' Why? I think this kind of 'matrix management' was developed as a way to keep everybody on direct charge for the project [i.e. billable to the project], not indirect charge."

Nearly everyone involved with defense contracting says it now combines the worst of both worlds. It permits neither cooperation between government and business nor the genuine arm's-length relationship and freedom from specifications that might permit companies to be more efficient and innovative. The one clear exception is the long-time collaboration between the Lockheed Corporation and the Special Projects Bureau of the Navy for

the production of submarine-launched ballistic missiles (the Polaris, Poseidon, and Trident models). Special Projects is run on the same principles as one of the design bureaus of the Soviet military establishment, with a cadre of officers that stays year after year and trains one crop of leaders after another from within. There is also little turnover among its counterparts at Lockheed. Management experts who have studied these two organizations consider it no accident that the record of their missiles has been so much better than the Pentagon's average, in both performance and cost.

"For as long as we have written records, the major improvements [in weapons] have come from outside this system," says one civilian expert. On his list are radar, the jeep, the first modern tank, the Browning automatic rifle, the nuclear submarines the regular Navy opposed—and the legendary P-51 fighter of World War II, which President Roosevelt had to force on the Army Air Force because it came from outside.

The priority of the system is to keep dollars moving, men on direct charge, management careers on track.

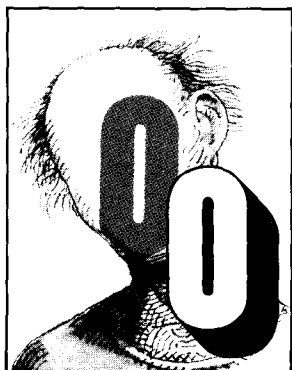
ON THE THIRD OF HIS VOYAGES, JONATHAN SWIFT'S Gulliver alights in the kingdom of Balnibarbi. There he finds a civilization that is given over to hypothesis and speculation and has lost touch with common sense. Its citizens are ill-clad, because their tailors design clothes with compass and quadrant rather than fitting them to the wearer. Its houses tumble down, because, in their fascination with the intricate geometry of the floorplans, they cannot be bothered to check that the angles are square and the roof is sound. In his description of the scientific academies that abounded in that nation, Swift captured the essence of the search for magic in modern American defense:

In these colleges the professors contrive new rules and methods of agriculture and building, and new instruments and tools for all trades and manufactures; whereby, as they undertake, one man shall do the work of ten; a palace may be built in a week, of materials so durable as to last forever without repairing; all the fruits of the earth shall come to maturity at whatever season we think fit to choose, and increase a hundred-fold more than they do at present, with innumerable other happy proposals. The only inconvenience is, that none of these projects are yet brought to perfection; and in the meantime, the whole country lies miserably waste, the houses in ruins, and the people without food or clothes. By all which, instead of being discouraged, they are fifty times more violently bent upon prosecuting their schemes, driven equally on by hope and despair. □

ZUCKERMAN UNBOUND

## LOOK HOMEWARD, ANGEL

BY PHILIP ROTH



N THE TABLE

beside the bed were five-cent Xerox copies of every page of every protest letter Dr. Zuckerman had mailed to Lyndon Johnson while he was President. In contrast to his collected letters to Hubert Humphrey, the Johnson folder, bound with a wide rubber band, was nearly as fat as *War and Peace*. The sparsity and brevity of the Humphrey letters—also their sarcasm, their abusive bitterness—showed how far Humphrey had sunk in Dr. Zuckerman's esteem since he'd been the darling of the ADA. Most days Humphrey had gotten no more than one line of contempt and three exclamation marks. And on a postcard, so that anybody who picked it up could learn what a coward the Vice President had become. But with the President of the United States, arrogant pig-headed bastard though he was, Dr. Zuckerman had tried to be reasonable on letterhead stationery, invoking the name of FDR at every opportunity, and elucidating his argument against the war with wisdom, not always assigned with the utmost scrupulosity, from either the Talmud or a long-deceased spinster named Helen MacMurphy. Miss MacMurphy, as all the family knew (as all the world knew, from the title story of *Higher Education*, Nathan Zuckerman, 1959), had been his eighth-grade teacher. In 1912 she had gone to Dr. Zuckerman's father, a sweatshop worker, to demand that bright little Victor be sent to high school instead of into the local hat factory, where an older brother was already crippling his fingers working as a blocker fourteen hours a day. And as all the world knew, she had prevailed.

Though Lyndon Johnson turned out to have neither the

time nor—in Mrs. Zuckerman's phrase—"the common decency" to respond to the letters he received from the lifelong Democrat ailing in Florida, Dr. Zuckerman went on dictating some three or four pages to his wife just about every other day, lecturing the President on American history, Jewish history, and his own personal philosophy. After the stroke that had wrung all coherence from his speech, he seemed not to have any idea what was going on in his room in the nursing home, let alone in the Oval Office, where his archenemy Nixon was now ruining things; but then slow improvement began once again—his will, the doctors told Mrs. Zuckerman, was a wonder to them. Mr. Metz came to visit and to read aloud to him from the *New York Times*, and then one afternoon Dr. Zuckerman managed to communicate to his wife that he wanted his correspondence folders brought to him from the table beside the wheelchair at home. She would, after this, sit there by his side and turn the sheets of paper, so he could see all he had once written and would live to write again. At his request, she began to show the letters to the nursing-home staff doctor who stopped by his bed to attend him. He was regaining his clarity, he was even beginning to demonstrate some of his old "fire," when one day, only moments after Mr. Metz had left, just as Mrs. Zuckerman had arrived to take up the afternoon shift, he dropped into unconsciousness and had to be rushed to the hospital. Mrs. Zuckerman found herself inside the ambulance with the correspondence folders in her hands. "Anything, anything," she said, explaining her state of mind to Nathan later, "anything to give him the will to go on." Zuckerman wondered if to herself, at least, she was able to say, "Enough, let it be over. I can't endure his enduring like this anymore."

But then, she was the wife whose every thought the man had been thinking for her since she was twenty years old, not the son who'd been fighting his every thought since he was younger even than that. On the plane flying down to Florida, after he received the news that his father had suffered a coronary, Zuckerman had been remembering the summer just twenty years ago, that August before he'd left for college, when he read three thousand pages of Thomas Wolfe straight through on the screened-in back porch of his family's stifling home—stifling that August as much because of the father as of the weather. "He believed himself thus at the

*This story is drawn from Philip Roth's new novel, Zuckerman Unbound.*

ILLUSTRATIONS BY MILTON GLASER

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center of life; he believed the mountains rimmed the heart of the world; he believed that from all the chaos of accident the inevitable event came at the inexorable moment to add to the sum of his life." Inevitable. Inexorable. "Oh yes!" noted stifled Nathan in the margin of his copy of *Look Homeward, Angel*, unaware that the resounding privative clang of the Latinate adjectives wasn't necessarily so stirring when you ran into the inevitable and the inexorable at the center of your life instead of on the back porch. All he wanted at sixteen was to become a romantic genius like Thomas Wolfe and leave little New Jersey and all the shallow provincials therein for the deep emancipating world of Art. As it turned out, he had taken them all with him.



ZUCKERMAN'S FATHER GOT "BETTER" AND THEN WORSE again all through the first night Nathan was there, and most of the following day. Sometimes when he came to, he seemed to his wife to be inclining his head toward the letters in the folder beside the bed; she took this to mean that he had something in mind to tell the new President. Inasmuch, thought Zuckerman, as he still had a mind. She wasn't making much sense anymore herself—she'd had no sleep for over twenty-four hours, and little during the four preceding years—and finally it was easier than not for Zuckerman to pretend that she might be right. He drew a yellow pad out of his briefcase and printed in large letters "STOP THE WAR"; below it, in his own hand, he signed "Dr. Victor Zuckerman." But when he showed the page to his father it evoked no response. Dr. Zuckerman made sounds from time to time, but they were barely distinguishable as words. They were more like the squeals of a mouse. It was awful.

At dusk, after Dr. Zuckerman had again been unconscious for several hours, the resident took Nathan aside and told him it would be over in a few hours. He would silently slip away, the doctor said, but then the doctor didn't know Nathan's father the way the family did. In fact, near the end, as sometimes happens to you if you're lucky—or unlucky—the dying man opened his eyes and seemed suddenly to see them all and to see them together, and to understand as well as anyone in that room exactly what was up. This was awful too, another way. It was more awful. His soft, misty gaze somehow grew enormous, bending their images and drawing them to him like a convex mirror. His chin was quivering—not from the frustrated effort of speech but from the recognition that all effort was pointless now. And it had been the most effortful life. Being Victor Zuckerman was no job you took lightly. Day shifts, night shifts, weekends, evenings, vacations—for sheer man-hours, not so different from being his son.

Gathered around him, when he came to, were his son Henry, his son Nathan, their mother, Cousin Essie, and

the newcomer to the family, Essie's kindly, genial husband, Mr. Metz, a retired accountant of seventy-five, who stood benignly apart from their ancient entanglements, reproaching no one for anything and thinking mostly about playing bridge. Each was to have stayed with Dr. Zuckerman for only five minutes, but because Nathan was Nathan, hospital rules had been suspended by the physician in charge.

They all closed in to look down at that terrified, imploring gaze. Essie, at seventy-four still nobody to tamper with, took hold of Dr. Zuckerman's hand and began reminiscing about the winepress in the cellar of the house on Mercer Street, and how all the cousins used to love to watch Victor's father crush the Concord grapes there in the fall. She had as big and commanding a voice as ever, and when she moved on from Victor's father's winepress to Victor's mother's mandel bread, a nurse came to the open door with a finger to her lips to remind Essie that people were sick.

Tucked way down into the bed sheets, Dr. Zuckerman could have been a frightened four-year-old listening to a story to put him to sleep, but for his moustache, and what three strokes and a coronary had done to his face. His gray, imploring eyes looked steadily back at Essie as she recalled how the century had begun for the new family in America. Was it getting through to him—the old winepress, the new American children, the sweet-smelling cellar, the crunchy mandel bread, and the mother, the revered and simple mother who baked the mandel bread? Suppose he could remember it all, every cherished sensation that had been his in the life he was leaving—was that necessarily the easiest way to go? Having buried her share, maybe Essie knew what she was doing. Not that not knowing had ever worried her before. Precious time was passing, but Essie wasn't one to stint on details, nor did Nathan see any way to stop her now that she had the floor. Besides, he couldn't hold anyone in check anymore—he couldn't hold himself in check anymore. After a day and a half, he was finally in tears. There were tubes to deliver oxygen to his father's lungs, tubes to drain the urine from his bladder, tubes to drip dextrose into his veins, and none of them would make the least difference. For several minutes it was he who felt like the four-year-old, discovering for the first time how utterly helpless his protector could be.

"Remember Uncle Markish, Victor?"

From Essie's vantage point, the homeless rascal Markish had been the family character; from Dr. Zuckerman's (and his older son's—cf. *Higher Education*), it had been Essie. Uncle Markish painted their houses and slept in their stairwells, and then picked up and went off one day in his coveralls to Shanghai, China. "You'll wind up like Markish" was what they would tell the children in that clan who came home from school with any grade lower than B. If you wanted to leave Jersey for China, you did it through the Oriental Studies Department of a top-



flight school and not with nothing to your name but a paint bucket and brush. In their family either you did things right, preferably as a D.D.S. or an M.D. or an LL.B. or a Ph.D., or you might as well not do them at all. Law laid down by the son of the toiling, uncomplaining mother who made the mandel bread and the driven, impregnable father who pressed the wine.

On the airplane down, Zuckerman had read through an illustrated paperback for laymen about the creation of the universe and the evolution of life. The author was a NASA scientist who had lately achieved celebrity by explaining elementary astronomy once a week on public television. Zuckerman bought the book off a rack at Newark Airport after meeting Henry for the flight to Miami. There were books from his boxes that might have meant more to him on his way to see his father die, but he couldn't get at them and so left the apartment for Newark empty-handed. What did those books have to do with his father anyway? If they'd ever meant to his father what the discovery of them had meant at school to him, it would have been another household, another childhood, another life. So, instead of thinking the thoughts of the great thinkers on the subject of death, he thought his own. There were more than enough for a three-hour flight: plans for his mother's future, memories of his father's life, the origin of his own mixed emotions. *Mixed Emotions* had been the title of his second book. It had confused his father no less than *Higher Education*, his first. Why should emotions be mixed? They weren't when he was a boy.



ZUCKERMAN HAD REACHED HENRY JUST AS HE'D GOTTEN back to the office from a conference in Montreal. He hadn't heard the news, and when Zuckerman gave it to him—"This looks like it"—Henry emitted the most wrenching sob. Another reason Zuckerman wouldn't be needing anything inspirational to read on the flight down. He had a kid brother to tend to, emotionally more fragile than he liked to let on.

But Henry arrived at the airport looking nothing like a kid, in a dark pin-striped suit and carrying in his monogrammed briefcase the back issues of a dental journal he meant to catch up on. And so Zuckerman, a little let down at not having to buck him up, and a little amused at feeling a little let down—stunned a little, too, that he should have been expecting a ten-year-old child to be in his charge flying south—Zuckerman wound up reading about the origin of everything.

As a result, when it was his turn to say good-bye to his father, he did not hark back to Grandma's mandel bread. Grandma's mandel bread had been wonderful enough, but Essie had covered it as thoroughly as anyone ever could, and so instead Zuckerman explained to him the big-bang theory, as he'd come to understand it the day

before. He would try to get through to him how long things had been burning up and burning out: maybe it would get through to the family as well. It wasn't just a father who was dying, or a son, or a cousin, or a husband: it was the whole creation, whatever comfort that gave.

Back before Grandma's mandel bread, then. Before even Grandma.

"I was reading on the plane about the beginning of the universe. Dad, do you hear me?"

"He hears, don't worry," said Essie. "He hears everything now. He's never missed a trick in his life. Right, Victor?"

"Not the world," said Nathan, to his father's searching eyes, "but the universe. Scientists now believe it began between ten and twenty billion years ago."

His hand rested lightly on his father's arm. It seemed impossible—there was nothing to that arm anymore. As little children the Zuckerman boys would watch with delight while their father pretended to inflate his biceps by blowing air in through his thumbs. Well, they were gone now, Papa's Popeye biceps, vanished like the primordial egg of hydrogen energy in which the universe was conceived . . . Yes, in spite of a growing sense that he was engaged in a flagrant act of pretentious, useless, professorial foolishness, Zuckerman lectured on: the original egg that one fine day, reaching a temperature of thousands of billions of degrees, blew itself wide open, and like an erupting furnace forged on the spot all the elements that would ever be. "All of this," he informed his father, "in the first half-hour of that very first day."

Dr. Zuckerman registered no surprise. Why should he? What was the first half-hour of the first day of Creation to the last half-hour of the last day of his life?

Oh, the mandel bread was a much better idea. Homely, tangible, and to the point of Victor Zuckerman's real life and a Jewish family deathbed scene. But the oration on mandel bread was Essie being Essie, and this, however foolish, was himself being himself. Proceed, Nathan, to father the father. Last chance to tell the man what he still doesn't know. Last chance ever to make him see it all another way. You'll change him yet.

"—the universe expanding outward ever since, the galaxies all rushing away, out into space, from the impact of that first big bang. And it will go on like this, the universe blowing outward and outward, for fifty billion years."

No response here, either.

"Go on, he's listening." Essie, giving instructions.

"I'm afraid," he told her softly, "it's hard enough to grasp when you're on top of the world—"

"Don't worry about it. Go on. This family has always been smarter than you think."

"I grant that, Esther. It's my stupidity I was thinking about."

"Talk to *him*, Nathan." It was his mother, in tears.

"Essie, I beg you, let sleeping dogs lie, at least tonight."

Nathan looked across the bed to Henry. His brother had a tight hold on one of his father's hands, but he too was running with tears and didn't look in any shape to say anything by way of farewell. The inexpressible love breaking out, or the blockaded hatred? Henry was the good son, but it didn't come cheap, or so Zuckerman was inclined to believe. Henry was the tallest, darkest, and handsomest by far of all the Zuckerman men, a swarthy, virile, desert Zuckerman whose genes, uniquely for their clan, seemed to have traveled straight from Judea to New Jersey without the Diaspora detour. He had a light, mellifluous voice, and the most kindly, gentle, doctorly manner, and invariably his patients fell in love with him. And he fell in love with some of his patients. Zuckerman alone knew this. Some two years earlier Henry had driven to New York in the middle of the night prepared to sleep in Nathan's study in Nathan's pajamas because he could not bear any longer to sleep in the same bed with his wife. Watching Carol undress for bed had caused him to remember (not that he had reason to forget) the body of the patient whom he had himself undressed only a few hours earlier in a north Jersey motel, and he fled to New York at two A.M., without even taking the time to pull socks on under his loafers. He sat up all night telling his big brother about his mistress, sounding to Zuckerman like some miserable, yearning, tenderized lover out of the great nineteenth-century literature of adultery.

Henry was still talking at seven A.M. when Carol phoned. She didn't know what she'd done wrong and had begged him to come home. Zuckerman picked up the extension to listen in. Henry was crying and Carol was pleading. "—you wanted plants like your grandmother had in her living room, I gave you plants. One day you said something about having had eggs in an eggcup as a kid on a vacation in Lakewood—the next morning I presented your boiled egg to you in an eggcup. And you were *like* a kid, so sweet, so delighted, so content from such a little thing. You couldn't wait until Leslie was old enough so you could begin to call him 'son.' You *didn't* wait. You used to lie on the floor with him and let him chew on your ear and you were in seventh heaven. You used to call out the door when dinner was ready, 'Son, come on home, time to eat.' You did it with Ruthie. You still do it with Ellen. You rush to do it when I say the food is ready. 'Little girl, come on, supper.' Ruthie plays 'Twinkle, Twinkle, Little Star' on her violin, and you, you fool, you're in tears, you're so happy. Leslie tells you that everything is made out of molecules, and you're so proud you're repeating it all night to anybody who calls. Oh, Henry, you are the softest, gentlest, kindest, most touching man there is, in your heart you are really the simplest man in the world to satisfy—"

So Henry went home.

Softest, gentlest, kindest. Responsibility. Generosity. Devotion. That's how everybody spoke of Henry. I sup-

pose if I were Henry with his heart I wouldn't jeopardize it, either. It probably feels very good being so good. Except when it doesn't. And that probably feels good in the end too. Self-sacrifice.

They were no longer the brothers they'd once been.



A HAND CAME GENTLY DOWN ON NATHAN'S SHOULDER—Essie's dapper, tanned, well-meaning husband. "Finish the story," said Mr. Metz softly. "You're telling it beautiful."

He had stopped to watch his emotional brother, but now he smiled and assured Mr. Metz that he would go on. It was the first time that Mr. Metz had ever referred to anything of Zuckerman's as a "story." Zuckerman's short stories he called articles. "Your mother showed me your article in the magazine. Excellent, excellent." He was famous for buttering everyone up, Essie for tearing them down. They were an act Zuckerman always tried to take in when he flew to see his parents in Florida. With his father as a third they could have gone on tour: Dr. Zuckerman was famous for fanatical devotion. FDR topped the list, followed by Mrs. Roosevelt, Harry Truman, David Ben-Gurion, and the authors of *Fiddler on the Roof*.

"You are their wordsmith," Mr. Metz whispered. "You are their mouthpiece. You can say for everyone what is in their hearts."

He turned back to his father: no closer to death, though just as far from life. "Dad, listen to me, if you can." For whatever it was worth, Nathan smiled at him. Last smile. "Dad, there's now a theory . . . if you can follow me."

Essie: "He can follow you."

"There is now a theory that when the fifty billion years are up, instead of everything coming to an end, instead of all the light going out because of all the energy fizzling away, gravity will take over. The force of gravity," he repeated, as though it were the familiar name of one of the beloved grandchildren up in South Orange. "Just at the edge of the end, the whole thing will begin to contract, will begin to rush back toward the center. Do you follow me? This too will take fifty billion years, until it's all pulled down inside that original egg, into this compressed droplet that it all began with. And there, you see, heat and energy build up again, and bang, another stupendous explosion, and out it'll all go flying, a brand-new roll of the dice, a brand-new creation unlike any that's been. If the theory is correct, the universe will go on like this forever. If it's correct—and I want you to hear this, this is what I want you to listen to very carefully, this is what we all want to tell you—"

"That's the ticket," said Mr. Metz.

"If it's correct, the universe *has* been going on forever: fifty billion years out, fifty billion years back. Imagine it. A universe being reborn and reborn and reborn, without end."

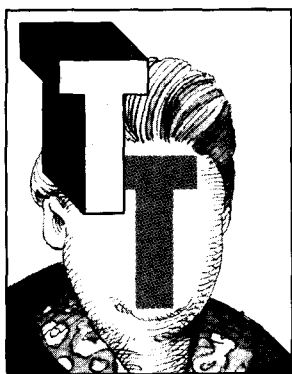
He did not, at this point, report to his father the objection to this theory as he had understood it on the plane ride down, a considerable objection, a crushing objection, really, having to do with the density of matter in the universe being marginally insufficient for the friendly, dependable force of gravity to take over and halt the expansion before the last of the fires went out. If not for this insufficiency, the whole thing might indeed oscillate to and fro without end. But according to the paperback still in his coat pocket, right now they couldn't find what they needed anywhere, and the chances for no ending didn't look good.

But this information his father could live without. Of all that Dr. Zuckerman had so far lived without and that Nathan would have preferred for him to live *with*, knowledge of the missing density factor was the least of it. Enough for now of what is and isn't so. Enough science, enough art, enough of fathers and sons.

A major new development in the life of Nathan and Victor Zuckerman, but then the coronary-care unit of Miami Heart Institute isn't the Goddard Institute for Space Studies, as anyone who's ever been there doesn't have to be told.

Though Dr. Zuckerman didn't officially expire until the next morning, it was here that he uttered his last words. Word. Barely audible, but painstakingly pronounced. "Bastard," he said.

Meaning who? Lyndon Johnson? Hubert Humphrey? Richard Nixon? Meaning He who had not seen fit to bestow upon His own universe that measly bit of missing matter, that one lousy little hydrogen atom for each volume of ten cubic feet? Or to bestow upon Dr. Zuckerman, ardent moralist from grade school on, the simple reward of a healthy old age and a longer life? But then, when he spoke his last, it wasn't to his correspondence folders that he was looking, or upward at the face of his invisible God, but into the eyes of the apostate son.



HE FUNERAL WAS a tremendous strain. There was the heat, for one thing. Over the Miami cemetery, the sun made its presence known to Zuckerman as no Yahweh ever had; had it been the sun they were all addressing, he might have entered into the death rites of his people with something more than just respect for his mother's feelings. The two sons had to support her between them from the moment they

left the air-conditioned limousine and started down between a row of twirling sprinklers to the burial plot. Dr. Zuckerman had bought two plots, for himself and for his wife, six years earlier, the same week he'd bought their condominium in Harbor Beach Retirement Village. Her knees gave way by the grave, but since she had been worn down by her husband's illness to little more than a hundred pounds, it was no problem for Henry and Nathan to keep her on her feet until the coffin was lowered and they could take refuge from the heat. Behind him, Zuckerman heard Essie tell Mr. Metz, "All the words, all the sermons, all the quotations, and no matter what they say, it's still final." Earlier, stepping from the limousine, she had turned to Zuckerman to give her assessment of the journey out for the man in the hearse. "You take a ride and you don't get to see the scenery." Yes, Essie and he were the ones who'd say anything.

Zuckerman, his brother, and the rabbi were, by decades, the youngest men present. The rest of them wilting there were either his parents' elderly neighbors from Harbor Beach or Newark cronies of his father's who'd also retired to Florida. A few had even been boys with Dr. Zuckerman in the Central Ward before World War I. Most of them Zuckerman hadn't seen since his childhood, when they'd been men not much older than he was now. He listened to the familiar voices coming out of the lined and jowled and fallen faces, thinking, If only I were still writing *Carnovsky*. What memories those tones touched off—the Charlton Street baths and the Lakewood vacations, the fishing expeditions to the Shark River inlet down the shore! Before the funeral everybody had come up to put their arms around him. Nobody mentioned the book; probably none of them had read it. Of all the obstacles in life that these retired salesmen and merchants and manufacturers had struggled with and overcome, reading through a book was not yet one. Just as well. Not even the young rabbi made mention of *Carnovsky* to the author. Perhaps out of respect for the dead. All the better. He was not there as "the author"—the author was back in Manhattan. Here he was Nathan. Sometimes life offers no more powerful experience than just such a divestment.

He recited the Mourners' Kaddish. Over a sinking coffin, even a nonbeliever needs some words to chant, and "*Yisgadal v'yiskadash . . .*" made more sense to him than "Rage against the dying of the light." If ever there was a man to bury as a Jew it was his father. Nathan would probably wind up letting them bury him as one too. Better as that than as a bohemian.

"My two boys," said his mother, as they lifted her along the path back to the car. "My two tall strong handsome boys."

Returning through Miami to the apartment, the limousine stopped for a light just by a supermarket; the women shoppers, most of them middle-aged and Cuban, were wearing halters and shorts, and high-heeled sandals. A



lot of protoplasm to take in straight from the post-retirement village of the dead. He saw Henry looking too. A halter had always seemed to Zuckerman a particularly provocative piece of attire—cloth not quite clothing—but the only thought inspired by these women oozing flesh was of his father decomposing. He'd been unable to think of much else since earlier in the day, when the family had taken seats together in the first row at the Temple and the young rabbi—bearded very like Che Guevara—began to extol from the altar the virtues of the deceased. The rabbi praised him not simply as father, husband, and family man but as “a political being engaged by all of life and anguished by the suffering of mankind.” He spoke of the many magazines and newspapers Dr. Zuckerman had subscribed to and studied, the countless letters of protest he had painstakingly composed, his enthusiasm for American democracy, his passion for Israel's survival, his revulsion against the carnage in Vietnam, his fears for the Jews in the Soviet Union, and meanwhile all Zuckerman was thinking was the word “extinguished.” All that respectable moralizing, all that repressive sermonizing, all those superfluous prohibitions, that furnace of pieties, that Lucifer of rectitude, that Hercules of misunderstanding, extinguished.

Strange. It was supposed to be just the opposite. But never had he contemplated his father's life with less sentiment. It was as though they were burying the father of some other sons. As for the character being depicted by the rabbi, well, nobody had ever gotten Dr. Zuckerman quite so wrong. Maybe the rabbi was only trying to distance him from the father in *Carnovsky*, but from the portrait he painted you would have thought Dr. Zuckerman was Schweitzer. All that was missing was the organ and the lepers. But why not? Whom did it harm? It was a funeral, not a novel, let alone the Last Judgment.

What made it such a strain? Aside from the heat and their lost, defenseless, seemingly legless mother? Aside from the pitiful sight of those old family friends, looking down into the slot where they too must be deposited, thirty, sixty, ninety days hence—the kibbitzing giants out of his earliest memories, so frail now, some of them, that despite the healthy suntans, you could have pushed them in with his father and they couldn't have crawled out . . . ? Aside from all this, there were his emotions. The strain of feeling no grief. The surprise. The shame. The exultation. The shame of that. But all the grieving over his father's body had taken place when Nathan was twelve and fifteen and twenty-one: the grief over all that his father had been dead to while living. From that grief the death was a release.



BY THE TIME HE BOARDED THE NEWARK PLANE WITH Henry, it felt like a release from even more. He couldn't entirely explain—or manage to control—this tide of

euphoria sweeping him away from all inane distractions. It was very likely the same heady feeling of untrammelled freedom that people like his agent, André Schevitz, had been expecting him to enjoy from becoming a household name. In fact, it had rather more to do with the four-day strain of Florida, with the wholly unineane exigencies of arranging for the burial of one parent and the survival of the other, that had put the household name and the Hallelujah Chorus behind him. He had become himself again—though with something unknowable added: he was no longer any man's son. Forget fathers, he told himself. Plural.

Forget kidnappers, too. During the four days away, his answering service had taken no message from either an ominous palooka or an addled Alvin Pepler. Had his *landsman* spent into Zuckerman's handkerchief the last of his enraged and hate-filled adoration? Was that the end of this barrage? Or would Zuckerman's imagination beget still other Peplers conjuring up novels out of his—novels disguising themselves as actuality itself, as nothing less than real? Zuckerman the stupendous sublimator spawning Zuckermaniacs! A book, a piece of fiction bound between two covers, breeding living fiction exempt from all the subjugations of the page, breeding fiction unwritten, unreadable, unaccountable, and uncontainable, instead of doing what Aristotle promised from art in Humanities 2 and offering moral perceptions to supply us with the knowledge of what is good or bad. Oh, if only Alvin had studied Aristotle with him at Chicago! If only he could understand that it is the writers who are supposed to move the readers to pity and fear, not the other way around!

He had never so enjoyed a takeoff in his life. He let his knees fall open and, as the plane went gunning like a hot rod down the runway, felt the driving level force of the fuselage as though it were his own. And when it lifted off—lifted like some splendid, ostentatious afterthought—Zuckerman suddenly pictured Mussolini hanging by his heels. He'd never forgotten that photograph on the front page of the papers. Who could, of his generation of American youngsters? But to remember the vengeful undoing of that vile tyrant after the death of your own law-abiding, anti-Fascist, nonviolent father, chief air-raid warden of Keer Avenue and lifetime champion of the B'nai B'rith Anti-Defamation League? Reminder to the outer man of the inner man he's dealing with.

Of course for some seventy-two hours now he had been wondering if his father's last word could really have been “Bastard.” Under the strain of that long vigil his hearing may not have been too subtle. Bastard? To mean what? *You were never my real son.* But was this father equal to such unillusioned thought, ever? Though maybe that's what he read in my eyes: *Henry's your boy, Papa, not me.* But from my two eyes? No, no, some things I'm not unillusioned enough for either, out of the safety of the study.

Maybe he just said "Faster." Telling Death his job the way he told his wife how to roll the winter rugs and Henry how to do homework when he dawdled. "Vaster"? Unlikely. Nathan's cosmology lecture notwithstanding, for his father, in dying as in living, there were still but two points of reference in all the vastness: the family and Hitler. You could do worse, but you could also do better. Better. Of course! Not "Bastard" but "Better." First principle, final precept. Not more light but more virtue. He had only been reminding them to be better boys. "Bastard" was the writer's wishful thinking, if not quite the son's. Better scene, stronger medicine, a final repudiation by Father. Still, when Zuckerman wasn't writing he was also only human, and he'd just as soon the scene wasn't so wonderful. Kafka once wrote, "I believe that we should read only those books that bite and sting us. If a book we are reading does not rouse us with a blow to the head, then why read it?" Agreed, as to books. But as for life, why invent a blow to the head where none was intended? Up with art, but down with mythomania.

Mythomania? Alvin Pepler. The very word is like a bell that tolls thee back to me.

That Pepler's credentials were in order—if nothing else—Essie had confirmed for Zuckerman the night after the funeral, when everyone else had gone to sleep. The two were in her kitchen eating the remains of the cinnamon cake served the guests earlier in the day. For as long as Zuckerman could remember, Essie was supposed to be eating herself into an early grave. Also smoking herself to death. She was one of many his father could always find time to lecture about the right way to live. "He used to sit at the window," Essie told Nathan, "sit there in that wheelchair and call down to the people parking their cars. They didn't park right to suit him. Just yesterday I ran into a woman who your mother is still afraid to talk to because of your old man. Old Mrs. Oxburg. She is from Cincinnati, a multimillionairess ten times over. When your little mother spots her coming, she runs the other way. One day Victor saw Mrs. Oxburg sitting in the lobby by an air-conditioner, minding her own business, and he told her to move, she was going to give herself pneumonia. She said to him, 'Please, Dr. Zuckerman, where I sit is none of your business.' But no, he wouldn't accept that for an answer. Instead he started telling her how our little cousin Sylvia died in 1918 of influenza, and how beautiful and smart she was, and what it did to Aunt Gracie. Your mother couldn't stop him. Whenever she tried just wheeling him away, he threw a fit. She had to go to the doctor to get Valium, and the Valium I had to keep for her here because if he found it he would start shouting at her about becoming a drug addict."

"He went a little over the top in that chair, Essie. We all know that."

"Poor Hubert Humphrey. I pity that poor bastard, if he read your father's postal cards. What the hell could Humphrey do, Nathan? He wasn't President, Vietnam

wasn't his idea. He was as flummoxed as the next guy. But you couldn't tell that to Victor."

"Well, Humphrey's torment's over now."

"So is Victor's."

"That too."

"Okay, Nathan—let's move on. You and me are not lilies of the valley. This is my chance to get the dirt, and without your mother in between, making believe you still use your little putz just to run water through. I want to hear about you and the movie star. I read all about you two in the papers. What happened? You dropped her or she dropped you?"

"I'll tell you all about the movie star, first tell me about the Peplers."

"From Newark? With the son, you mean? Alvin?"

"Right. Alvin from Newark. What do you have on him?"

"Well, he was on television. They had those quiz programs, remember? I think he won twenty-five grand. He had a big write-up in the *Star-Ledger*. This is years ago already. He was in the Marines before that. Didn't they award him a Purple Heart? I think he got it in the head. Maybe it was the foot. Anyway, when he came on they used to play 'From the Halls of Montezuma' in his honor. What do you want to know about him for?"

"I ran into him in New York. He introduced himself on the street. I would say from our meeting that it was the head, not the foot."

"Oh yeah? A screwball? Well, he was supposed to know his Americana inside out—that's how he won the dough. But of course they gave them the answers anyway. That was the big scandal. For a while he was all anybody in Newark talked about. I went to high school with his Aunt Lottie back in the year one, so I followed every week how he came out. Look, everybody did. Then he lost and that was that. Now he's nuts?"

"A little, I thought."

"Well, that's what they tell me about you, you know. And not just a little."

"What do you tell them?"

"I say it's true. I say he has to wear a straitjacket all the way to the bank. That shuts them up. How about the movie star? Who dumped who?"

"I dumped her."

"Idiot. She's gorgeous and must be worth a fortune. For Christ's sake, Nathan, why?"

"She's gorgeous and worth a fortune, but not of our faith, Esther."

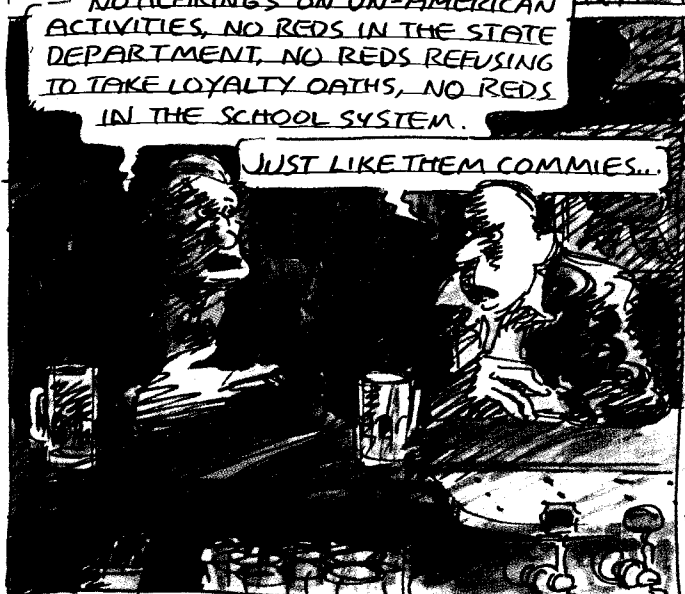
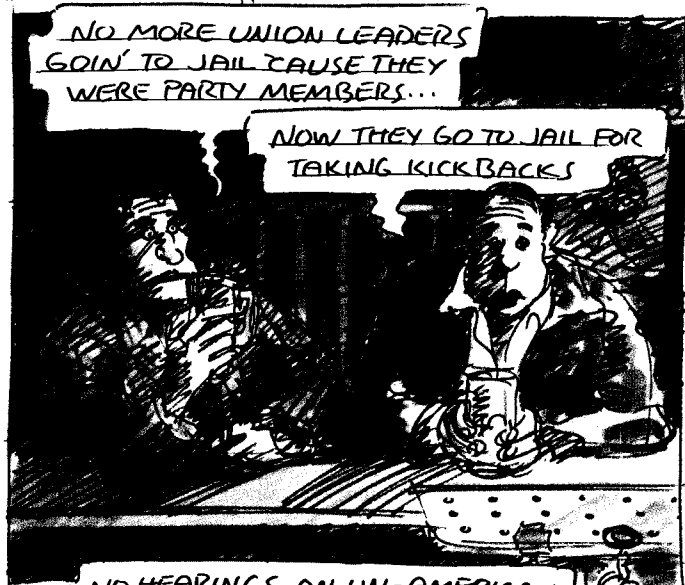
"I don't remember that stopping you before. I thought, myself, it egged you on. So who are you driving wild now?"

"Golda Meir."

"Oh, you're a sly little fox, Nathan, behind those harmless professor's glasses. You were always taking it in, even as a kid. There was your brother, the goody-good patrol boy who never stayed up past his bedtime, and

## BETRAYAL ON THE LEFT

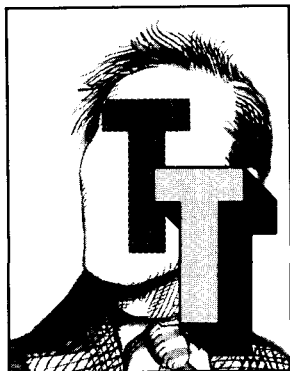
BY EDWARD SOREL



Edward Sorel



there was you, thinking to yourself what a bunch of stupid bastards we all were. Still, I have to hand it to you, you have put something over on the public with this book. If I were you, I wouldn't listen to one goddamn thing they say."



THE SEAT-BELT sign had flashed off, and Henry had tilted his seat back and was sipping the martini he'd ordered at takeoff. He was hardly what you'd call a drinking man, and in fact was taking down the martini like a slightly noxious medicinal preparation. His complexion seemed somehow darkly sickish that morning—rather than darkly romantic—as though cinders had been ground into his skin. Zuckerman couldn't remember seeing his brother so emotionally done in since a weekend thirteen years before, when he'd come down from Cornell as a sophomore and announced he was giving up chemistry to become a "drama major." He was fresh from appearing as the Ragpicker in *The Madwoman of Chaillot*. Henry had gotten the lead role in the first college production he'd tried out for, and now he spoke with reverence at the dinner table of the two new influences on his life: John Carradine, who had played the Ragpicker on Broadway, and whom he hoped to emulate on the stage (in appearance, as well—he'd already lost ten pounds trying), and Timmy, the young student director of the Cornell *Madwoman*. Timmy had painted flats the summer before in Provincetown, where his parents had a vacation house. Timmy was sure he could get Henry work there too, "in stock." "And when is this?" asked Mrs. Zuckerman, who was still abashed at how thin he'd gotten. "Timmy says next summer," Henry answered. "Next June." "And what about the Chernicks?" his father asked. The previous two summers Henry had worked as a waterfront counselor for two Newark gym-teacher brothers who owned a camp for Jewish children in the Adirondacks. The job had come to someone as young as Henry as a special favor from the Chernicks to his father. "What about your responsibility to Lou and Buddy Chernick?" he was asked. In the way of vulnerable, ceremonious, intelligent children who all their lives have been delivering obedience in the form of streaming emotion, Henry couldn't give his father the kind of answer he might have come up with in a course in ethics—he ran from the table instead. Because all the way down from Ithaca he'd been expecting the worst—

because for three days he'd been unable to eat, in dread of this very meal—he collapsed before it even got half as bad as he'd predicted it would to Timmy. The two boys had for days rehearsed the scene together in their dorm, Timmy playing Dr. Zuckerman like a miniature Lear, and Henry as a rather outspoken version of himself—Henry playing at being Nathan.

Only three hours into the visit, and Nathan had to be phoned in Manhattan—secretly, and tearfully, by his mother—and told to come right home to make peace between the Ragpicker and his father. Carrying messages back and forth between Henry—locked in his bedroom quoting Timmy and Sinclair Lewis's *Babbitt*—and his father—in the living room enumerating the opportunities denied to him in 1918 that life was now offering to Henry on a silver platter—Nathan was able to negotiate a settlement by three A.M. All decisions about Henry's career were to be postponed for twelve months. He could continue to act in student plays but at the same time he must continue to carry on as a chemistry major and to fulfill his "obligation," if only for one more summer, to the Chernicks. Then, next year, they would all sit down together to reassess the situation . . . a meeting that never took place, because by the following fall Henry was engaged to Carol Goff, a girl judged by Henry's father to have "a head on her shoulders," and no more was heard of John Carradine or of Timmy, either. *Timmy!* The young drama student's Christian name couldn't have sounded more Christian, or more seditious, as enunciated by their father in the heat of the fray. During that memorable Friday-night family battle back in 1956, Nathan had himself dared to counter at one point with the sacred name of Paul Muni, but "*Timmy!*" his father cried, like a war whoop, "*Timmy!*" and Nathan saw that not even Paul Muni as wily Clarence Darrow, not even Paul Muni live in their living room as patient Louis Pasteur could have persuaded Dr. Zuckerman that a Jew in pancake makeup on the stage was probably no more or less ridiculous in the eyes of God than a Jew in a dental smock drilling a tooth. Then Henry met sweet and studious Carol Goff, a scholarship girl, and gave her his ZBT pin—and so the argument with his father ended for good. Zuckerman figured that was why he'd given her the pin, though officially, he knew, it was to commemorate the loss of Carol's virginity earlier that night. When Henry tried the next semester to get the pin back, it so upset Carol and her family that two weeks later Henry changed his mind and got engaged to Carol instead. And, in their senior year, the upshot of Henry's gently trying to break the engagement was their marriage the month after graduation. No, Henry simply couldn't bear to see this kindly, thoughtful, devoted, harmless, self-sacrificing creature suffering so, and suffering so over him. He couldn't bear to make anybody who loved him suffer. He couldn't be that selfish or that cruel.

In the days after the funeral, Henry had several times

simply begun to sob in the middle of a conversation—in the middle of a sentence having nothing to do with the death of their father—and in order to collect himself, had gone out to take a long walk alone. One morning only minutes after Henry had fled the apartment, unshaven and again close to tears, Zuckerman called Essie in to keep his mother company at breakfast and ran downstairs after his brother. Henry seemed so disturbed, so in need of consolation. But when Zuckerman came out of the lobby onto the sunny esplanade beside the pool, he saw Henry already out on the street, making a call in a phone booth. So, another love affair. That torment too. *The Crisis*, thought Zuckerman, in *the Life of a Husband*.



IN MIAMI BEACH, ZUCKERMAN HAD REFRAINED FROM bringing up the deathbed scene with his brother. For one thing, their mother was nearly always within earshot, and when he and Henry were alone, either Henry was too unhappy to talk to or they were making plans for their mother's future. To their dismay, she had refused to come up with them to Jersey to stay a while with Henry and Carol and the kids. Maybe later, but for now she insisted on remaining "close" to her husband. Essie was going to sleep on the living-room sofa bed so that their mother wouldn't be alone at night, and her canasta-club friends had volunteered to take turns staying with the grieving widow during the day.

On the plane he had his first chance to learn what Henry thought about what he still couldn't puzzle out for himself. "Tell me something. What was Dad's last word that night? Did he say 'Better'?"

"'Better'? Could be. I thought he said 'Batter.'"

Zuckerman smiled. As in "Batter my heart, three-person'd God," or "Batter up!"? He asked, "You sure?"

"Sure? No. But I thought it was because of Essie talking about the old days and Grandma. I thought he was all the way back, seeing Grandma over the mandel bread."

Well, there was Tolstoy, thought Zuckerman, to support Henry's conjecture. "To become a tiny boy, close to mother." What Tolstoy had written only days before his own death. "Mama, hold me, baby me . . ."

"I thought he said 'Bastard,'" Zuckerman told him.

Now Henry smiled. The smile his patients fell in love with. "No, I didn't hear that."

"I thought he might be writing one last letter to Lyndon Johnson."

"Oh, Christ," said Henry. "The letters," and he went back unsmilingly to sipping his drink. Henry had received his share: after the near-defection at Cornell, a letter a week beginning "Dear Son."

Minutes later Henry said, "Even little Leslie, age seven, became a correspondent of Dad's, you know."

"I didn't."

"Poor kid. He's never gotten another, before or since.

He thinks he should get mail all the time now, because of his three letters from Miami."

"What'd they say?"

"'Dear Grandson. Be nicer to your sisters.'"

"Well, from now on he can be as cruel to them as he likes. Now," Zuckerman added, remembering his brother dashing down to the outdoor phone booth, "we can all be as cruel as we like."

Zuckerman ordered a martini too. First time in his life he'd had a drink only an hour after his eggs. The same was certainly true for Henry. But the inner man was having his day.

Each finished the first drink and ordered a second.

"You know all I could think at the funeral?" Henry said. "How can he be in that box?"

"That's mostly what everybody thinks," Zuckerman assured him.

"The top is screwed on and he'll never get out."

They were flying over Carolina farmland. Clear from thirty-five thousand feet where Mondrian got the idea. The tons of tilled soil, the fibrous net of rooted vegetation, and his father under it all. Not only the lid, not only the few cubic feet of floury Florida loam and the dignified slab of marble to come, but the whole outer wrapping of this seven-sextillion-ton planet.



## CROWS

BY CHARLES SIMIC

Just so that each stark,  
Spiked twig,  
May be even more fierce  
With significance,

There are these birds  
As further harbingers  
Of the coming wintry reduction  
To sign and enigma:

The absolutely necessary  
Way in which they shook snow  
Out of their wings,  
And then remained, inexplicably

Thus, wings half-open,  
Making two large algebraic x's  
As if for emphasis,  
Or in the mockery of . . .

"Do you know why I married her?" Henry suddenly said.

Ah, so that's who's boxed in and will never get out. Dear Son. Screwed down beneath the tonnage of those two little words.

"Why?" asked Zuckerman.

Henry closed his eyes. "You won't believe this."

"I'll believe anything," Zuckerman told him. "Professional deformity."

"I don't want to believe it myself." He sounded sick with self-recrimination, as though he were sorry now that he'd planted a bomb in his luggage. He was unhinged, all over again. He shouldn't be drinking, Zuckerman thought. There would be worse recriminations later if he went ahead and spilled some humiliating secret. But Zuckerman made no attempt to save his brother from himself. He had a powerful taste for such secrets. Professional deformity.

"Know why I married Carol?" This time he used her name, as though deliberately to make what he was about to confess more brutishly indiscreet. But it wasn't Henry's savagery, really; it was the savagery of his conscience, overtaking him before he'd even begun to violate its tenets.

"No," replied Zuckerman, to whom Carol had always seemed pretty but dull, "not really."

"It wasn't because she cried. It wasn't because she'd been pinned with the pin and then engaged with the ring. It wasn't even everybody's parents expecting us to . . . I loaned her a book. I loaned her a book, and knew if I didn't marry her I'd never see it again."

"What book?"

"*An Actor Prepares*. A book by Stanislavsky."

"Couldn't you buy another?"

"My notes were in it—from when I was rehearsing the Ragpicker. Do you remember when I was in that play?"

"Oh, I remember it."

"You remember that weekend I came home?"

"I sure do, Henry. Why didn't you go and ask her for the book?"

"It was in her room in the women's dorm. I thought of getting her best friend to steal it for me. This is true. I thought of breaking in there and stealing it myself. I just couldn't bring myself to say that I wanted it back. I didn't want her to know that we were about to break up. I didn't want her to think afterward that all I could think about at a time like that was my book."

"Why did you give it to her in the first place?"

"I was a kid, Nate. She was my 'girl.' I loaned it to her after our first date. For her to see my notes. I was showing off, I suppose. Oh, you know how you loan somebody a book. It's the most natural thing in the world. You get excited and you loan it to them. I was full of a friend I'd made—"

"Timmy."

"God, yes. Timmy. You remember. The Provincetown

Players and Timmy. Not that I had an ounce of talent. I thought acting was seething and sobbing. No, nothing would have come of it. And it isn't that I don't love my own work. I do, and I'm goddamn good at it. But the book meant something to me. I wanted Carol to understand. 'Just read this,' I told her. And the next thing I knew, we were married."

"At least you got the book back."

He finished off the second drink. "And a lot of good it did me."

Then do him some good, thought Zuckerman. It's why he's made you his confessor. Help him raise this lid still holding him down. Lend a hand. As their father used to say, "He's your brother—*treat* him like a brother."

"Did you ever act in Chekhov that year at Cornell?"

"I had a career of two plays at Cornell. Neither was Chekhov."

"Do you know what Chekhov said as a grown man about his youth? He said he'd had to squeeze the serf out of himself drop by drop. Maybe what you ought to start squeezing out of yourself is the obedient son."

No response. He had closed his eyes again—he might not even be listening.

"You're not a kid, Henry, beholden to narrow conventional people whose idea of life you're obliged to fulfill. He's dead, Henry. Aside from being in that box with the lid screwed down, he is also dead. You loved him and he loved you—but he tried to make you somebody who would never do anything or be anything that couldn't be written up in the *Jewish News* under your graduation picture. The Jewish slice of the American piety—it's what we both fed on for years. He'd come out of the slums, he'd lived with the roughnecks—it must have terrified him to think we'd grow up bums like Sidney. Cousin Sidney, collecting the quarters from the kids who sold the football pools. But to Daddy he was Longy Zwillman's right arm. To Dad he was Lepke."

"To Dad, becoming a drama major at Cornell made you Lepke." His eyes were still shut, and the smile was sardonic.

"Well, a little of Lepke wouldn't kill you at this point."

"It isn't me I'm worried about killing."

"Come on, you're a bigger character than this. An actor prepares. Well, you've been preparing for thirty-two years. Now deliver. You don't have to play the person you were cast as, not if it's what's driving you mad."

Inventing people. Benign enough when you were typing away in the quiet study, but was this his job in the unwritten world? If Henry could perform otherwise, wouldn't he have done so long ago? You shouldn't put such ideas in Henry's head, especially when he's already reeling. But reeling was when somebody could catch you right on the jaw. And besides, Zuckerman was by now a little drunk, as was his kid brother, and somehow, a little drunk, it seemed to him idiotic that his kid brother



shouldn't have what he wanted. To whom was he closer? Probably more corresponding genes in Henry than in any other animal in the species. More corresponding memories, too. Bedrooms, bathrooms, duties, diseases, remedies, refrigerators, taboos, toys, trips, teachers, neighbors, relatives, yards, stoops, stairwells, jokes, names, places, cars, girls, boys, bus lines . . .

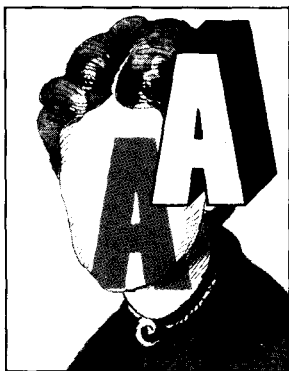
Batter. The mixture that time had beaten together for making Zuckermans. Suppose their father had closed things out with that: Boys, you are what I baked. Very different loaves, but God bless you both. There's room for all types.

Neither the Father of Virtue nor the Father of Vice but the Father of Rational Pleasures and Reasonable Alternatives. Oh, that would have been very nice indeed. But the way it works, you get what you get and the rest you have to do yourself.

"How unhappy are you at home, Henry?"

He answered with his eyes pressed tightly shut. "It's murder."

"Then, for Christ's sake, start squeezing."



AT NEWARK AIR-  
port Zuckerman's limousine was waiting. He had phoned early that morning from Miami to arrange to be met by a car with an armed driver.

He'd slept poorly the night before, thinking of his return to Manhattan and the possibility that the ravishing of his handkerchief by Pepler was not the end of his defilement but only the beginning. What if the wanton ex-Marine was packing a gun? What if he should be hiding in the elevator and try strangling Zuckerman to death? Zuckerman could not only envision the scene—by four A.M., he could smell it. Pepler weighed a ton and reeked of Aqua Velva. He was freshly shaved. For the murder or for the TV interview afterward? *You stole it, Nathan! My hang-up! My secret! My money! My fame!* JERK-OFF ARTIST KILLS BARD OF JERKING-OFF; ZUCKERMAN DEAD BY ONANIST'S HAND. Most disappointing to be gripped once again by such elemental fears—fears that by dawn had all but vanished; nonetheless, before leaving, he had phoned ahead to hire somebody at least to protect him during the initial stage of re-entry. But when he saw the limousine, he thought, *I should have taken the bus. Forget retribution. That's over too. There are no avengers.*

He walked up to the limousine. The driver was in full livery and dark glasses. "I'm Nathan Zuckerman," Zuckerman said.

"I recognized you, sir."

He came back to his brother. Henry was waiting to say good-bye before going to pick his car up in the parking lot.

"I'm all alone," Zuckerman said. "If you should need a place to sleep."

Henry recoiled a little at the suggestion. "I have to get to work, Nathan."

"You'll call me if you need me?"

"I'm all right," Henry said.

He's angry, Zuckerman thought. Now he has to go home knowing he doesn't have to. I should have let him be. You can leave her if you want to. Only he doesn't want to.

They shook hands in front of the terminal. Nobody watching would ever have imagined that once upon a time they had eaten ten thousand meals together, or that only an hour earlier they were momentarily as close as they had been back before either had written a book or touched a girl. A plane took off, roaring in Nathan's ears.

"He did say 'Bastard,' Nathan. He called you a bastard."

"What?"

Suddenly Henry was furious—and weeping. "You *are* a bastard. A heartless conscienceless bastard. What does loyalty mean to you? What does responsibility mean to you? What does self-denial mean, *restraint*—anything at all? To you everything is disposable! Everything is *exposable*! Jewish morality, Jewish endurance, Jewish wisdom, Jewish families—everything is grist for your fun-machine. Even your shikshas go down the drain when they don't tickle your fancy anymore. Love, marriage, children, what the hell do you care? To you it's all fun and games. *But that isn't the way it is to the rest of us.* And the worst is how we protect you from knowing what you really are! And what you've done! You killed him, Nathan. Nobody will tell you—they're too frightened of you to say it. They think you're too famous to criticize—that you're far beyond the reach now of ordinary human beings. But you killed him, Nathan. With that book. *Of course* he said 'Bastard.' He'd seen it! He'd seen what you had done to him and Mother in that book!"

"How could he see? Henry, what are you talking about?"

But he knew, he knew, he knew, he'd known it all along. He'd known it when Essie, over their midnight snack, had told him, "If I were you, I wouldn't listen to one goddamn thing they say." He'd known during the rabbi's eulogy. And he'd known before that. He'd known when he was writing the book. But he'd written it anyway. Then, like a blessing, his father had the stroke that sent him into the nursing home, and by the time *Carnovsky*

appeared he was too far gone to read it. Zuckerman thought he had beaten the risk. And beaten the rap. He hadn't.

"How could he see it, Henry?"

"Mr. Metz. Stupid, well-meaning Mr. Metz. Daddy made him bring it to him. Made him sit there and read it aloud. You don't believe me, do you? You can't believe that what you write about people has *real consequences*. To you this is probably funny too—your readers will die laughing when they hear this one! *But Dad didn't die laughing*. He died in misery. He died in the most terrible disappointment. It's one thing, God damn you, to entrust your imagination to your instincts. It's another, Nathan, to entrust *your own family*! Poor Mother! Begging us all not to tell you! Our mother, taking the shit she's taking down there because of you—and smiling through it! And still protecting you from the truth of what you've done! You and your superiority! You and your hijinks! You and your 'liberating' book! Do you really think that conscience is a Jewish invention to which you are immune? Do you really think you can just go have a good time with the rest of the swingers without troubling yourself about conscience? Without troubling about anything but seeing how funny you can be about the people who have loved you most in the world? The origin of the universe! When all he was waiting to hear was 'I love you!' 'Dad, I love you'—that was all that was required! Oh, you miserable bastard, don't you tell me about fathers and sons! I *have* a son! I know what it is to love a son, and you don't, you selfish bastard, and you never will!"



UNTIL THE SPRING

of 1941, when the boys were eight and four and the Zuckermans moved into the one-family brick house on the tree-lined street up the hill from the park, they had lived at the less desirable end of their Jewish neighborhood, in a small apartment building at the corner of Lyons and Leslie. The plumbing and the heating and the elevator and the drains were never working all at the same time, the Ukrainian superintendent's daughter was Thea the Tease, an older girl with a big bust and a bad reputation, and not everybody in the building had a kitchen floor like the Zuckermans' that you could eat off if worse came to worst. But because of the low rent, and because of the bus stop out front, it was an ideal place for the office of a young chiropodist. In those days Dr. Zuckerman's office

was still in the front room, where the family listened to the radio at night.

Across the street from the boys' back bedroom, on the other side of a high wire fence, was a Catholic orphanage with a small truck farm where the orphans worked when they weren't being taught—and, as Nathan and his little friends understood it, being beaten with a stick—by the priests in the Catholic school. Two old dray horses also worked on the farm, a most unexpected sight in their neighborhood; but then the sight of a priest buying a pack of Luckies in the candy store downstairs, or driving by in a Buick with the radio on, was more unexpected still. What he knew about horses he knew from *Black Beauty*; about priests and nuns he knew even less—only that they hated the Jews. One of Zuckerman's first short stories, written in his freshman year of high school and called "Orphans," was about a small Jewish boy with a bedroom window overlooking a Catholic orphanage, who wonders what it would be like to live behind their fence rather than his. Once a dark heavysset nun had come over from the orphanage to have his father cut away an ingrown toenail. After she left, Nathan had waited (in vain) for his mother to go into his father's office with a pail and a rag to clean the door handles the nun had touched coming and going. He had never been more curious about anything in his life than about the nun's unshod feet, but his father said nothing that evening within hearing distance of the children, and at six, Nathan was neither young enough nor old enough to go ahead and ask what they looked like. Seven years later the nun's visit became the centerpiece of "Orphans," a short-short story sent out to the editors of *Liberty*, then *Collier's*, then *The Saturday Evening Post*, under the name Nicholas Zack, and for which he received his first set of rejection slips.

Instead of going directly back to New York, he instructed the driver to follow the sign that said "Newark," postponing for just a while longer the life of the Nathan Zuckerman whom the mute inglorious little Zack had rather surprisingly become. He guided the driver along the highway and up the ramp to Frelinghuysen Avenue; then past the park and the tip of the lake where he and Henry had learned to ice-skate, and up the long Lyons Avenue hill; past the hospital where he had been born and circumcised, and on toward that fence that had been his first subject. His driver was armed. The only way, according to Pepler, to enter this city anymore.

Zuckerman pushed the button that lowered the glass partition. "What sort of weapon do you carry?" he asked the driver.

"A .38, sir."

"Where do you carry it?"

He slapped his right hip. "Like to see it, Mr. Z.?"

Yes, he should see it. Seeing is believing and believing is knowing and knowing beats unknowing and the unknown.





*La Monte Young's influence has been felt in  
"free" jazz, punk rock, and serious modern composing*

## A FATHER FIGURE FOR THE AVANT-GARDE

BY ROBERT PALMER

FROM THE OUTSIDE, 6 HARRISON STREET LOOKS LIKE any other turn-of-the-century industrial building in a lower Manhattan neighborhood of warehouses, lofts, and loading docks, where trucks rev their motors from sunrise to sunset. Just inside the door a receptionist in a sports shirt and jeans sits at a desk, behind a line of blinking telephone extensions. A plaque on the opposite wall identifies the building as the original New York Mercantile Exchange. The plaque has been cleaned and polished, and the rest of the building seems to have been meticulously restored. A broad stone stairway leads up to the second of five spacious floors. From the bottom of the stairway one can hear, faintly, a continuous, musical droning—a luminous chord that sounds vaguely like an old cathedral organ, or perhaps something more ancient. Except for the occasional percussive clicks that the receptionist makes as she routes telephone calls to their destinations inside the building, the chord is the only sound.

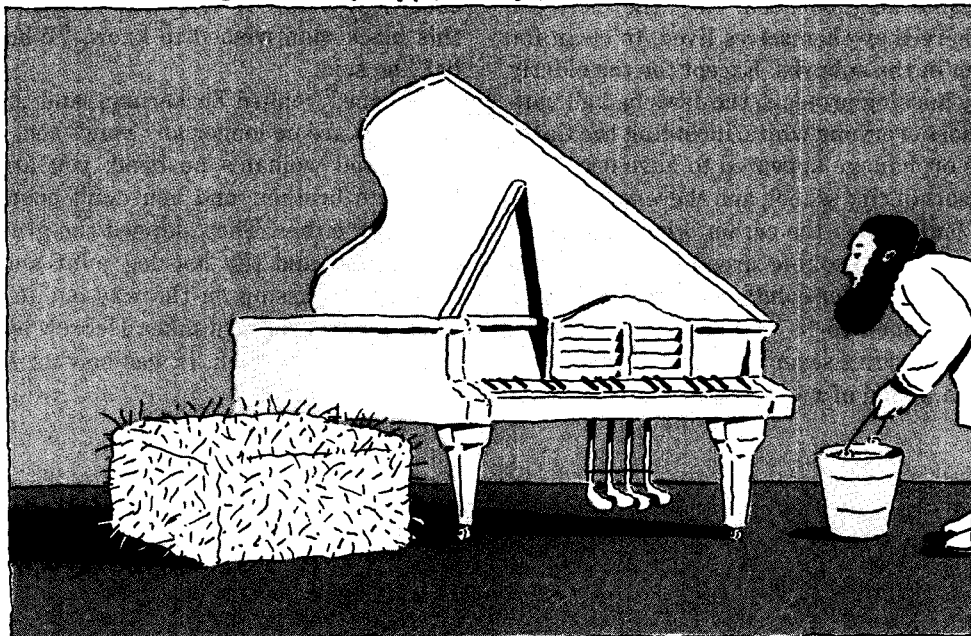
The Harrison Street building, which includes two floor-through performance spaces, listening rooms, galleries, a tape library and archive, the beginnings of a recording studio, artists' studios, and dressing rooms, is supported by the Dia Art Foundation and devoted to the presentation and preservation of work by an American

composer—La Monte Young. His wife and collaborator, Marian Zazeela, and their teacher, the Indian vocalist Pandit Pran Nath, share the facilities, but essentially, 6 Harrison Street is intended to be a monument to Young. It may represent the most lavish funding of an individual musician since Ludwig II subsidized Wagner; Dia will not disclose the total. Such munificence is unique at a time when most composers either compete for short-term grants and fellowships or depend on teaching as a means of earning a living. It has occasioned a certain amount of jealous sniping by other composers, some of whom maintain that Young's relationship with his wealthy patrons has made him a composer more heard of than heard.

Nevertheless, Young has been enormously influential. John Rockwell of the *New York Times* has written that "Young's role as father figure for the younger avant-garde is surpassed only by John Cage," and the French critic Daniel Caux has compared him to Cage, Schoenberg, and Louis Armstrong—musicians who attracted scores of disciples, dramatically altered the ways in which music is composed and performed, and occasioned searching re-examinations of what music is and can be.

Young is the originator of a school of music that stresses simplicity, stasis, and repetition rather than the traditional Western values of complexity and develop-

### *Piano Piece for David Tudor #1*



*Bring a bale of hay and a bucket of water  
onto the stage for the piano to eat and drink.*

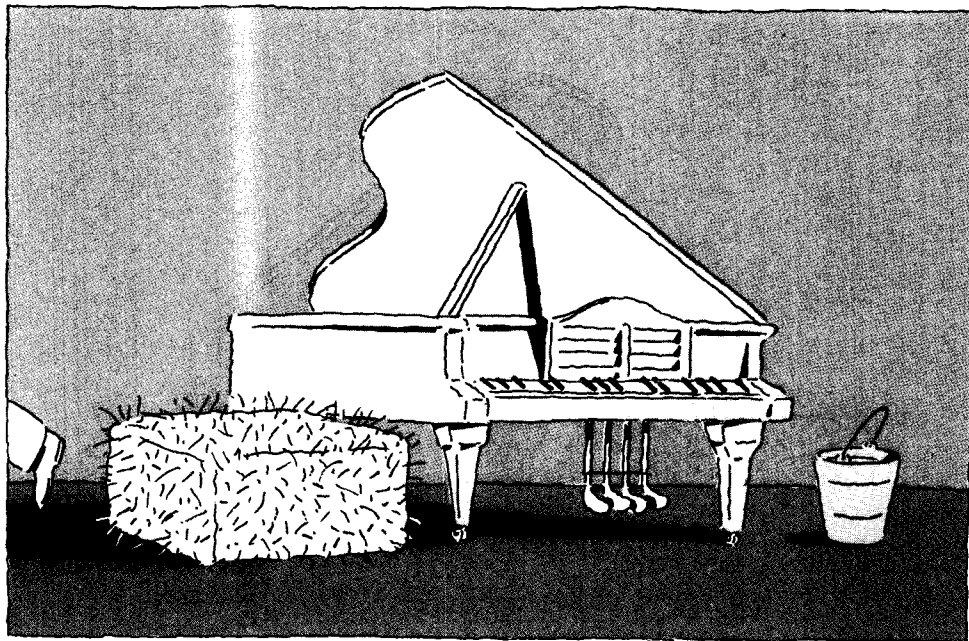
ment. His innovations predated and influenced the work of Philip Glass, Steve Reich, and Terry Riley, who are among the most widely discussed and frequently imitated younger American composers. But his impact has not been limited to contemporary concert music. In Los Angeles in the late 1950s, before he became a full-time composer, Young organized his first group—a jazz ensemble, in which he played saxophone. Several of the musicians in the group went on to revolutionize modern jazz, as key members of the original Ornette Coleman quartet, the first “free jazz” band. In New York a few years later, Young became an originator of the Fluxus movement, which pioneered mixed-media and performance art. As part of his Fluxus activities, he organized New York’s first series of loft concerts, which were held at Yoko Ono’s loft on Chambers Street. In those days, SoHo was a grimy industrial district; today it is the center of New York’s artistic and cultural life, and Young played an important part in this transformation. In the mid-sixties, he organized his second group. Several of the musicians he trained adapted his ideas to rock as early members of the Velvet Underground, the band that most directly and decisively shaped contemporary punk and New Wave rock. The rock composer, producer, and electronics wizard Brian Eno recently remarked, “La Monte Young is the daddy of us all.”

Paternal imagery keeps cropping up when Young’s name is mentioned, and one is only mildly surprised to learn that he was born in a log cabin and that *his* father was a shepherd. The Dia Art Foundation, which is

funded by the oil-technology fortune of Houston’s de Menil family, recently bought the log cabin and is having it restored. The acquisition is of a piece with Dia’s other projects, which include environmental art works on a monumental scale by Walter De Maria, Jim Turrell, and Dan Flavin. It is also in keeping with Young’s view of himself as a composer with a future. Though his own singing and piano playing are integral to his music, he is already training a handful of select students to perform his most important works; he trains them by example, in emulation of the guru-disciple system of musical education practiced in India. And one of his projects is a “Dream House,” a sound environment with electronically sustained tones that will continue long after his death—ideally, forever.

FROM THE LOBBY OF 6 HARRISON STREET, ONE TAKES AN elevator to the top floor, where Young works with Marian Zazeela. She has directed the lighting for all of Young’s musical presentations since the early sixties. Outside the elevator one encounters a long, low bench with several pairs of shoes on it and a sign requesting that visitors remove their shoes before proceeding. A door opens into an office with plain white walls and gray industrial carpeting on the floor. Two desks sit on truncated legs a few inches above the carpet and Don Otto, who sees to it that the complex Harrison Street operation runs smoothly, sits cross-legged on the floor. Other staff members, including a full-time archivist, a publicist, a recording engineer and sound systems expert, and several secretaries and part-time assistants, are in and out. Otto keeps track of what they’re doing, coordinates the

*Robert Palmer’s book Deep Blues, a study of music from the Mississippi Delta, is being published this month.*



*The performer may then feed the piano  
or leave it to eat by itself.*



restoration work that always seems to be going on somewhere in the building, and screens callers.

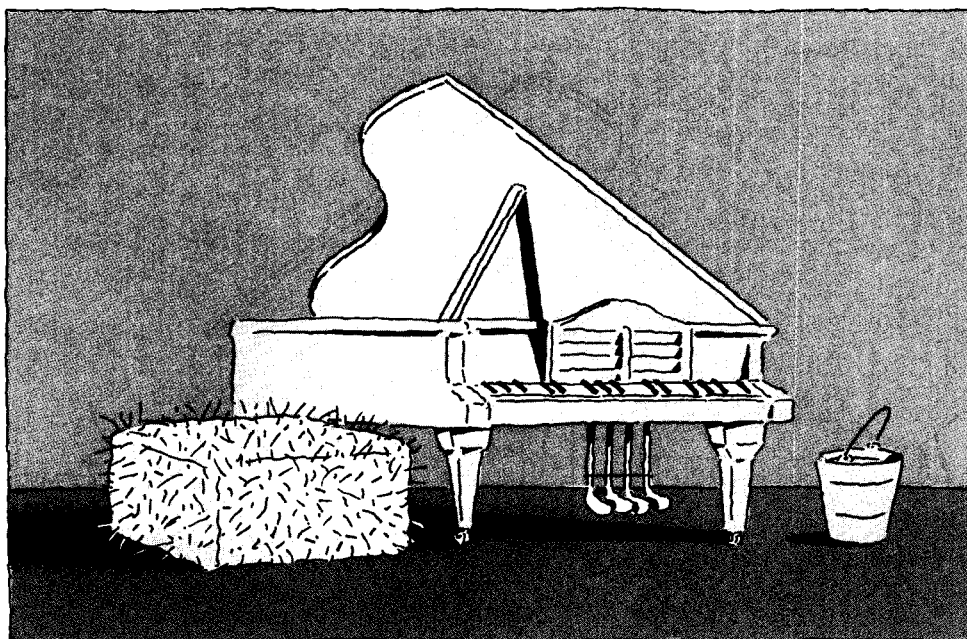
La Monte Young wears loose-fitting Indian garments, and his round, weather-seasoned face is framed by a long, tangled, graying beard. One's first impression is that he is an ascetic, a being whose head is in the clouds and whose feet rarely touch the earth, but this impression is quickly dispelled by his broad grin and flatly nasal Idaho accent. He was born in Bern, a Mormon hamlet, on October 14, 1935, and expounding on his origins is something he seems to enjoy immensely. "At the time that I was born," he says, "there were about 149 people in Bern. They were all Mormons except one, and he was a very good soul, they tell me. It was a beautiful place to have begun life, because, no doubt about it, really, it leaves a person completely innocent and unexposed to the real world that you and I know is out there, having lived so much of our lives in big cities. It was very pure there. When spring came, I would go out and sit on the porch, and all I saw were fields and clouds and hills, and nothing else entered my mind."

Young's wife is a New Yorker who met him in 1962, shortly after she graduated from Bennington, where she majored in painting. In addition to her settings for Young's work, which involve muted, colored spotlights and delicate hanging mobiles, she executes calligraphy and abstract pen and pencil designs that are minutely detailed. She is also a practical sort, an organizer. In the mid-sixties, before she and Young attracted patronage from the art world, she worked as an assistant supervisor in the television forwarding department of an advertising agency. "According to La Monte's sister, he was always a real dreamer," she says. "He just didn't have his

mind on practical events, and she takes a lot of credit for getting him out to school with his shoes tied and stuff like that."

When the wind whipped around the cabin during Bern's ferocious winters, the ends of the logs would vibrate and the cabin would resonate, amplifying the sound into a pulsating chord. Young enjoyed listening to it. Later, when he was old enough to go into nearby Montpelier with his father, he would visit his grandfather's Conoco station. There was a power plant nearby, and Young gradually developed an interest in the sound of the step-down transformer. It was a long, sustained tone, rich in harmonics—high, silvery, almost inaudible secondary tones that seemed to slip in and out of the range of hearing. Later still, after the family had moved to Los Angeles, Young worked his way through high school in a machine shop and discovered that the lathe and drill press made a similar sort of sound—a sustained tone that turned out to be a whole complex of tones if one listened carefully. Often he would whistle or sing along.

At the age of seven, Young took up the saxophone. His father and mother had some familiarity with the instrument and gave him his first lessons, and his Uncle Thornton, who had led a dance band in Kansas City, also played it. But aside from informal home entertainments, some of which featured a very young La Monte tap dancing and singing cowboy songs, the family's musical activities were centered on the Mormon Church. In high school Young gravitated toward jazz, and the life-style that went with it. He grew sideburns and a goatee, which he shaved off, under duress, before playing a saxophone solo at his graduation. By the time he entered Los Angeles City College, the next fall, he had grown them back, and



*The piece is over after the piano has been  
fed or after the piano eats or decides not to.*



the hair on his head was getting eccentrically long under the beret he invariably wore. "I was a notorious dresser," he admits. "I think that it was at least partly a result of coming from a very poor family. I remember how I always wanted to wear real Levis and all the family could afford to buy me was a pair of overalls."

At jam sessions around Los Angeles, Young frequently encountered the saxophonist Ornette Coleman, who tended to follow his own muse when soloing even if it led him far away from the blues and popular-song forms that were the basis of all jazz improvisation. The trumpeter Don Cherry and the drummer Billy Higgins, who later joined forces with Coleman and abandoned stock forms in favor of more spontaneous creation, also participated in these sessions, and in the mid-fifties, before they began working with Coleman, they played in a group organized by Young. Already, there was a tendency within the group to fragment the beat, by using odd rhythmic configurations. This manner of playing wasn't uniquely Young's; he had been influenced by several older saxophonists, notably Lee Konitz and Warne Marsh. But tape recordings indicate that he took the idea of rhythmic fragmentation an important step further and probably helped pave the way for the "free jazz" that Cherry and Higgins began playing with Coleman a few years later.

YOUNG STUDIED MUSIC AT LOS ANGELES CITY COLLEGE, where the great jazz saxophonist Eric Dolphy was a friend and classmate and where he came under the influence of Leonard Stein, a virtuoso pianist who had worked closely with Arnold Schoenberg, the pioneer of atonal, or serial, music. Young had already been introduced to Schoenberg's work by his high school harmony teacher, but Stein opened up for him a whole world of contemporary music—Webern, Boulez, Stockhausen. He continued to study privately with Stein after he entered UCLA, where he majored in music.

While at UCLA, Young heard one of the first recordings of Indian music released in the United States, a performance of two ragas by Ali Akbar Khan. The university had one of the country's leading ethnomusicology departments, and several experts in Gagaku, the ancient Japanese court music, were in residence. At the same time, Young was exposed to recordings of early European plain chant. He heard the same thing in all this music—long, sustained tones. It was what had attracted him to the sound of the wind, the power transformer, and the machine shop, and he began to study the use of unchanging tones, which are called drones, in world music.

His student compositions, which had been faithful emulations of the atonal style that was then in full flower, started to take an unusual tangent. In 1957, he wrote a piece called "for Brass," which followed the structural dictates of strict serialism but included a long, static middle section in which single tones were sustained for

three or four minutes, with other long tones occasionally overlapping them. The piece included several periods of utter silence, too, and there was very little that could conceivably be called melody. In 1958, Young completed his Trio for Strings, which was even more static—it took five minutes to present just four notes. "Almost everyone," he recalls, "thought that I had gone off the deep end."

Young was an outstanding music student, and he made it through college on what he describes as "a long string of awards, grants, and teaching assistantships." By the time he finished the Trio for Strings, in September of 1958, he had won a Woodrow Wilson fellowship to do graduate work at the University of California at Berkeley. There he met Terry Riley, who says Young had a profound influence on him: "I listened to his music for brass and the string trio, the long tones. He used to talk about getting inside of a note, getting inside the sound." At the end of his first year at Berkeley, Young was awarded a scholarship to the Darmstadt Festival for New Music, in West Germany. There he studied with Karlheinz Stockhausen and was introduced to the ideas of John Cage.

Before Young left Berkeley, two friends, Dennis Johnson (now a mathematician) and Terry Jennings (a composer and saxophonist), played recordings for him of Cage's Sonatas and Interludes for Prepared Piano, which were influenced by Balinese music and date from 1946–1948, and his String Quartet from 1950. But listening to these pieces did not prepare Young for what he describes as "the breadth of Cage's work, the philosophical aspects." In 1952, Cage had published *4'33"*, a composition that instructed a musician to sit at his instrument for four minutes and thirty-three seconds, playing nothing but periodically turning the pages of a blank score. The point was that any sound could be construed as music, and the sounds that made up *4'33"* came from the audience—random coughing, sneezes, hands shuffling through the pages of program books. The element of chance or indeterminacy began to fascinate Cage, and on May 15, 1958, at New York's Town Hall, he premiered his Concert for Piano and Orchestra, which was composed using chance procedures derived from the Chinese *I Ching*, or "Book of Changes"—an "oracle" of numbered philosophical discourses that one consults by throwing coins or yarrow stalks.

In Europe, new music still meant serialism, a rigorous organizational method that attempted to quantify every aspect of music—pitch, rhythm, duration, timbre—and left nothing at all to chance. Karlheinz Stockhausen, who was born in 1928 and already enjoyed a reputation as one of the brightest young serialist composers, was fascinated by Cage's radicalism and made his ideas an important part of the seminars at Darmstadt. David Tudor lectured on Cage's ideas and played a tape of the Concert for Piano and Orchestra. He was scheduled to play a

composition by Young, a piano study that involved long silences, but, the day before the recital, the music was mysteriously lost; it turned up several days later. Stockhausen and Tudor were impressed by Young's work, especially toward the end of the seminar, when he showed them his Trio for Strings. Stockhausen began including discussions of Young's pieces in his composition classes, and less than a year later Tudor and Cage gave the first performances of his music in New York and Europe.

YOUNG RETURNED TO NEW YORK, WHERE HE BECAME friends with Richard Maxfield, who composed electronic music. Then he hitchhiked across the country to Berkeley, where he completed his final year of graduate studies and composed prolifically. Not everyone was willing to call his creations compositions. The more elaborate ones involved various gestures and were as much theatrical as musical. They were clearly influenced by Cage, but they were different. "I would take a period of time and structure events in a way that was like my Trio for Strings," he explains, "where you have these long events going on and overlapping. In other words, you wouldn't have one guy shoveling coal, and then have him jump into a sleeping bag. You would just have one guy shoveling coal, and a different person would be jumping into the sleeping bag, and if the person got out of the sleeping bag, maybe a rest would go by before they would fry eggs."

In 1960, Young produced a series of numbered compositions that were even more radical. Composition 1960 #2 instructed the performer to build a fire in front of the audience. "The composition may be of any duration," Young noted. "In the event that the performance is broadcast, the microphone may be brought up close to the fire." Composition 1960 #5 instructed the performer to "turn a butterfly (or any number of butterflies) loose in the performance area." In a letter he wrote to Tony Conrad, a musician and filmmaker, about this time, he asked, "Isn't it wonderful if someone listens to something he is ordinarily supposed to look at?" Other pieces were more whimsical. "Bring a bale of hay and a bucket of water onto the stage for the piano to eat and drink," he instructed in Piano Piece for David Tudor #1. "The performer may then feed the piano or leave it to eat by itself. If the former, the piece is over after the piano has been fed. If the latter, it is over after the piano eats or decides not to."

Some of Young's 1960 compositions continued the static approach he had initiated with his pieces "for Brass" and Trio for Strings. Composition 1960 #7 was a score consisting of a single two-note chord, with the instruction "to be held for a long time." Composition 1960 #9 was a horizontal line; in performance, Young realized it by sustaining a single tone. "People said I was playing one note," he says, "but I was trying to make it very clear

that even if you try to play the same thing over and over, it will always be different. Also, I really enjoyed hearing tones sustained, being able to just listen to them for their pristine beauty. It helps you learn to listen to all the components of a given sound, its particular mode of vibration, its harmonic structure."

In the summer of 1960, when he was in the midst of his series of 1960 compositions, Young came to New York on an Alfred Hertz Memorial Travelling Scholarship, intending to study composition with Cage and Richard Maxfield. It was the last of the grants and fellowships that had carried him through his academic studies; the next several years would be lean ones. But financial considerations were of secondary importance. In New York, Young met a number of artists whose ideas and style he found congenial. Many of them were introduced to him by Maxfield.

In 1958, Maxfield had taught some sessions of John Cage's summer class at The New School. Among the class members were Jackson Mac Low, George Brecht, Dick



## PASTORAL

BY ELLEN BRYANT VOIGT

Crouched in the yard,  
he brings his dirty hands up to his mouth.  
*No, no, I say. Yuck. Hurt.*

These are sounds he will recognize.  
I say them when he takes an orange  
with its hidden seeds and allergenic juice.  
*No. Yuck. Bad orange.* Or reaming  
from his mouth a wad of bread,  
a lump of odorous cheese.  
The fire will hurt.  
The stick will break and stab you  
in the heart. The reckless wheel,  
the cool suggestive music of the pond.

Overhead, summer spreads its blue scarf;  
a light wind bends the hollyhocks;  
birds, trees—  
everything the way I might have dreamed it,  
he stands in the grass,  
weighing a handful of berries,  
a handful of stones.

Higgins, Allan Kaprow, and Al Hansen, all of whom became involved in presenting "Happenings," or performance art. "Arguably," Peter Frank writes in his article "Fluxus in New York," published in a German magazine, "the whole American school of Happenings came out of this class. Inarguably, the seeds of the Fluxus sensibility were sown in this class." Visitors to the class included \* Morton Feldman, Lucia Dlugoszewski, and Larry Poons. Through early performances by these students of Cage's, other artists were drawn into the emerging Fluxus gestalt. But the performances were isolated and sporadic until December of 1960, when Young organized the series of concerts and mixed-media events that took place in Yoko Ono's loft. The performers, each of whom presented at least two evenings of original work, included Mac Low, Maxfield, the dancer Simone Forti, Young's friend Terry Jennings, Ono's husband Toshi Ichihyanagi, and Henry Flynt, who coined the term "concept art." Further concerts were held at the A/G Gallery in 1961.

The cofounder of the A/G Gallery was George Maciunas, a Lithuanian émigré who took a New School course from Maxfield in 1961 and met Young there. Through Young he met the artists who were to form the Fluxus circle and began sponsoring their performances. When Young assembled concept pieces, scores, and texts from most of these artists for a San Francisco magazine that folded before the material could be published, Maciunas designed a layout, and Young and Jackson Mac Low published the collection as *An Anthology*. The book amounted to a Fluxus manifesto, and when the loose pages came back from the printer, they were collated in the course of a lively party at Walter De Maria's loft. Billy Higgins, the brilliant jazz drummer who had been a member of Young's first group, played De Maria's drum kit, and Sandy Bull improvised sinuous, Eastern-sounding music on guitar. The music, conversation, and collation continued into the morning.

Maciunas continued to publish and present work by Fluxus artists and served as a focus for the cheerfully anarchic movement until his death in 1978. During the mid-sixties he began acquiring loft buildings in SoHo and incorporating them as artists' co-ops. The tenants were mostly Fluxus artists, many of whom he had met through Young. SoHo's present reputation as a world center for artistic endeavor can be traced directly to Maciunas's activities during these years.

**Y**OUNG AND MARIAN ZAZEELA WERE MARRIED IN 1963. By this time, Fluxus was in full bloom, but Young was more interested in making music than in organizing performances by other artists or editing more anthologies. He had been playing the saxophone informally, often with Walter De Maria on drums or Angus MacLise on hand drums, but not the alto he had wielded as a young Los Angeles jazzman. After a brief flirtation

with the tenor, he bought a sopranino, the smallest, highest-pitched member of the saxophone family, and began executing quicksilver improvisations of remarkable speed and fluency. Later in 1963, Young and Zazeela moved into a loft on Church Street, and Young began rehearsing daily with a group that included MacLise, Tony Conrad on violin, and Zazeela on vocals. Conrad and Zazeela were providing a continuous, static drone. Within a few months they were joined by John Cale, a classically trained musician from Wales who swelled the drone with his electric viola. At some performances, Young switched from sopranino saxophone to piano, which he played in a resonant, rolling, essentially static style, and a large gong, which he played with a bow in order to produce the sustained tones that continued to interest him.

One day in 1964, Young decided he liked the hum of his aquarium motor—he and Marian were keeping turtles—and decided to amplify it and use it as a drone. He was awarded a small assistance grant by the National Institute of Arts and Letters in 1964, and more substantial grants and fellowships followed; finally he was able to pay his rent, and to invest in several sine-wave generators, which emit a single pure, stable tone. He dispensed with percussion entirely, and the music evolved into an incredibly loud, insistent droning, with some improvised vocal ornamentation by Young. This was the beginning of his Theater of Eternal Music, a group (originally Young, Zazeela, Conrad, and Cale) that would perform a single, theoretically endless composition: *The Tortoise, His Dreams and Journeys*. Ideally, the sine-wave drone that was the basis of the piece would be set up in a permanent installation—a Dream House—and sound continuously, with Young's group coming in from time to time to improvise long tones along with it. But he was unable to find a permanent site; instead, he kept the sine waves going twenty-four hours a day in the Church Street loft.

**F**OR A WHILE DURING THE MID-SIXTIES, JOHN CALE WAS rushing from Young's daily rehearsals to sessions with the Velvet Underground, a rock group that also included Walter De Maria and Angus MacLise during its early stages. By 1967, when the Velvets recorded their first album, the group's dominant personalities were Cale (who had left Young's group the year before) and the singer-songwriter Lou Reed. Reed's lyrics dealt forthrightly with hard drugs, sadomasochism, and other subjects that had previously been considered taboo in popular music. Their content, and Cale's innovative work on viola and keyboards, attracted the attention of Andy Warhol, who began featuring the Velvets in a traveling light-and-sound presentation he called the Exploding Plastic Inevitable. Warhol lent his name and reputation to the group's initial album, which credits him as producer. *The Velvet Underground & Nico* was strong stuff;



song titles included "Heroin" and "The Black Angel's Death Song," and much of the music was a metallic machine-shop roar. Most pop listeners preferred the Beatles' *Sgt. Pepper's Lonely Hearts Club Band*, which was released around the same time, but the first Velvets album has proved equally influential.

Few critics have realized how decisively La Monte Young's music—his drone groups, his early piano playing, his *Drift Studies* for sine-wave generators, his insistence on setting his amplification at numbing volume levels—shaped the sound and style of the Velvet Underground. For that matter, it has never been easy for critics or the public to hear Young's music. During the middle and late sixties, when he was friendly with Warhol and his group overlapped with the Velvets, he could have jumped on the Warhol bandwagon. He provided drone music for several of the static films Warhol was making, but when they were shown at a Lincoln Center film festival and festival officials insisted that he turn the sound down, he lost interest in the collaboration.

The first commercial recordings of the new static, or minimalist, or repetition music that Young pioneered were two Columbia Masterworks albums by Terry Riley, *In C* and *A Rainbow in Curved Air*. The company attempted to record Young, but again he insisted on complete artistic control and the project never came to fruition. By the mid-sixties he had realized that it was possible to tap other sources of funding. "I had several friends who were painters," he explains, "and I would see someone like Larry Poons do a painting and sell it for a fortune, while I was working my head off to do concerts and getting nothing. There was also the example of John Cage, who was showing his scores in galleries and getting support for concerts from people who ordinarily supported art events. I was interested in doing my work in the purest way possible—trying to become a popular or commercial musician never appealed to me—and it seemed that the art crowd was more in line with that. And they seemed to be dealing in much bigger numbers. I'm completely uncompromising when it comes to controlling my work, but I have no reason not to sell it as long as I don't have to compromise in the course of doing it."

Young's early art-world boosters included David Hays and Henry Geldzahler. In 1965, Geldzahler, then an associate curator at the Metropolitan Museum, presented Young's group to his friends in a private concert at his home. Around this time, Young began offering collectors master tapes of his music on lifetime loan, that is, for the duration of his life. After his death, the tapes were to revert to his estate. Zazeela designed boxes for the tapes and several collectors "borrowed" them.

In 1967, Walter De Maria introduced the Youngs to Heiner Friedrich, a German art collector who owned a gallery in Munich. Friedrich developed an intense interest in their work after attending several concerts, and

began visiting their loft to listen to tapes of performances. He told them he hoped someday to establish a foundation for funding noncommercial artistic endeavors. In 1969, Fabio Sargentini invited Terry Riley, the Youngs, and some other experimental musicians and artists to participate in a festival at his gallery in Rome. The Youngs performed for expenses, but Sargentini leased one of their tapes. Then, as they were preparing to return to New York, Heiner Friedrich asked them to fly to Munich. "We went on the last day of our ticket," Zazeela recalls, "just on a hope and a prayer that Heiner would pay our way back."

"Right away," Young says, "Heiner liked our idea of a sound-and-light environment that would run for, say, two weeks, and he committed his gallery. He drove us around Munich collecting the equipment we would need, and what it turned into was our first Dream House. The sine-wave drones and the lights were going day and night, and Marian and I would sing from time to time, leaving it for people to try to intuit when we would be there. Then Heiner suggested putting out some of our music as a record, and he produced an album for us. He looked at our program notes and asked us why we didn't put them together with other writings to make a book. So he financed a Dream House, a record, and a book just like that! He was just proving himself right off."

Over the next few years, Friedrich became the Youngs' principal patron. In 1974, he organized the Dia Art Foundation with Philippa Pellizzi, the youngest daughter of Jean and Dominique de Menil. Finding a site for a permanent Dream House installation was one of the foundation's first projects, and it was eventually decided that 6 Harrison Street was the ideal place. Young gave his first concerts there this past January, and has continued to do so on a regular basis.

THE ROOM WITH THE MOST SPECTACULAR VIEW AT 6 Harrison Street is reserved for Pandit Pran Nath, an Indian classical vocalist who divides his time among New Delhi, New York, and California, and who is the Youngs' musical and spiritual guru. Young's singing was originally inspired by Indian vocal music, especially recordings by Salamat and Nazakat Ali Khan. Then, in the late sixties, he heard a tape of Pandit Pran Nath, who had helped to train the Ali brothers. "His music had something that I had never heard before in any other music," Young says. "First of all, he was singing *perfectly* in tune. Secondly, the feeling that came out of his music was just so strong, so powerful, so moving and beautiful, that I was drawn to studying with him. I wasn't looking for a teacher; I had already invented a style of music and made a number of contributions. But he was probably the best musician I had ever heard, and although I was totally happy with my own work, I felt that studying with him would be extraordinarily important."

The Youngs have been Pran Nath's disciples since 1970. Pran Nath has not instructed them in any established religion, since he is himself, as Young puts it, "some kind of a mixture of a Hindu and a Moslem." But he has painstakingly taught them the intricacies of India's classical vocal music and Indian ideas concerning the spiritual values of sound. When he gives concerts on the East Coast, they accompany him on tamboura, the stringed instrument that provides the resonating drone in Indian music. With Dia's help, they have been able to make studio recordings of dozens of his performances, each of which consists of strictly controlled vocal improvisations based on a different raga, or melodic structure.

The system of ragas, and the fact that each one is traditionally associated with a specific time of day and a psychological state, is a subject that Young finds particularly fascinating. "The mere fact that they have the means to classify the moods of the different ragas, in whatever poetic way, means they have something that has almost totally disappeared from Western music," he maintains. "Each raga very strongly establishes a mood, and each new emotional turn, each coloring of the basic mood, is determined by the musician's performance. And Indian music has the highest performance standards of any system in the world."

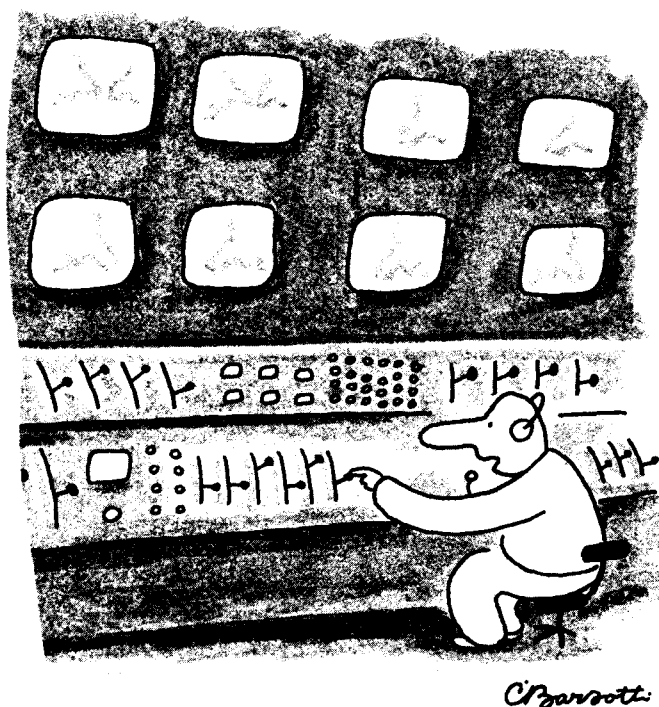
Some ragas are similar to Western major and minor scales, but the correspondences are never exact. The reason is that Indian and Western classical music utilize different tuning systems. Indian music is based on the harmonic series as it exists in nature. When a string is plucked or bowed or a horn is blown into or a syllable is sung by a human voice, a complex sound is produced. This sound consists of a fundamental vibration and a multitude of secondary vibrations, or overtones, each with its own particular frequency. The secondary vibrations, which are called harmonics, arrange themselves into a predictable pattern in accordance with known physical laws; this pattern is known as the harmonic series.

Prior to the eighteenth century, most European music conformed to the harmonic series, but then several pivotal works, especially J. S. Bach's *The Well-Tempered Clavier*, popularized an alternate tuning system—equal temperament. In equal temperament, the acoustically perfect octave (perfect because the C above middle C, for example, vibrates exactly twice as fast as middle C) is arbitrarily subdivided into twelve equidistant intervals. Equal temperament made it possible for keyboard players to move easily through twelve keys, or tonal centers. Without it, the sophisticated harmonies of romantic and post-romantic music would never have developed. But even Arnold Schoenberg, whose twelve-tone system gave each of the twelve tones in the equal-tempered octave equal weight, admitted that in the West, to have a musical ear means "to have an ear in the *musical* sense, not in the *natural* sense."

One can discover how right Schoenberg was by holding

the sustaining pedals of a piano down while sounding the interval of a third, a C and an E, for example. In equal temperament, the interval of a third is acoustically imperfect; the relationship of E to C on the piano can only be represented by an irrational fraction. And the chord made up of E and C *sounds* irrational. When it is sustained, it produces a sour, discordant, fluttering effect; it seems to waver in and out of tune.

"Equal temperament is a compromise," says Young, "and most musicians will tell you that it's a justifiable compromise. They'll say that even though you're hearing a reminder of the truth, rather than the true harmonic intervals, the ear is able to make the adjustment automatically. Sure, it's able to, but what is the advantage? If you want to go through life making adjustments, saying, 'Well, he meant to give me four dollars, but instead he gave me \$3.25,' that's your business. But if somebody says 'love' to me, I want to know that it means love, not love minus 23 percent. I don't want to knock the Western classical tradition. A volume of literature was produced that is important. It's beautiful, it's inspirational. But that doesn't mean that the whole question of tuning has been settled once and for all. To me, the harmonic series represents the truth, to put it simply, and what I have tried to demonstrate in the Dream House and in some of my other works is that you can play the actual truth itself, and that it sounds much better."



"Right, more pathos. You got it."

YOUNG WAS PERTURBED BY EQUAL TEMPERAMENT AS early as 1964. It was one of the principal reasons he abandoned the saxophone, which is fixed in equal temperament. One day when he was thinking about the problem, he realized that he had at hand an instrument he could tune into just intonation—a tuning that conforms to the harmonic series. The instrument was the piano. Young began tuning an upright by ear, and when, after several months, he arrived at a tuning he considered both harmonious and potentially interesting, he began playing. He found that the new tuning enabled him to sustain stable, harmonious chords for remarkably long periods. When he played rapidly, many of the piano's strings vibrated sympathetically, producing a rich, shimmering cloud of sound. He worked out several themes and organized them into sections that could be expanded with appropriate improvisations. With typical modesty, he called his new composition *The Well-Tuned Piano*.

Tapes of *The Well-Tuned Piano* went into Young's archive, but as a piece for public performance it seemed impractical. The tuning process required weeks of painstaking work, and if the piano had to be moved during that time, the process would take even longer. But ten years after Young first realized his tuning, in 1974, Fabio Sargentini heard a tape of *The Well-Tuned Piano* and offered to provide the composer with a Bösendorfer piano and all the time he needed to perfect his tuning. In June of that year, Young gave the first concert performance of *The Well-Tuned Piano*, in Rome, and Sargentini was so elated that he decided to preserve the tuning by purchasing the Bösendorfer and giving Young \$1000 (he recalls) to autograph it.

In May of 1975, the Dia Art Foundation sponsored a Dream Festival in a SoHo gallery. There were performances by Terry Riley, Pandit Pran Nath, and the trumpeter and composer Jon Hassell; tape concerts of Richard Maxfield's music (Maxfield had died in 1969); and, as the highlight of the festival, the American premiere of *The Well-Tuned Piano*. Sargentini's Bösendorfer was brought to New York for the premiere, and was later purchased by Dia for \$14,000. During the next few years, Young continued to work on the piece—refining the tuning, inventing new chords and new sections. It has replaced *The Tortoise, His Dreams and Journeys* as the composition Young is most interested in performing. His first concerts at 6 Harrison Street were eight Sunday-evening performances of *The Well-Tuned Piano*, each of which lasted between three and four hours.

*The Well-Tuned Piano* is a series of rolling, thunderous chords that sometimes sound uncannily like an enormous choir or an orchestra. Quieter passages that display Young's tuning in a simple, uncomplicated manner provide periodic moments of respite before the fireworks begin again. The piece has not been a huge success with music critics, many of whom consider the tuning haunting but complain that Young's playing lacks variety and

that the duration of the performances is unduly taxing. But the work has attracted listeners who return again and again to sit, cross-legged and entranced, on the carpeted floor of Harrison Street's downstairs performing space, formerly the trading floor of the Mercantile Exchange. By radically altering the piano's tuning, Young has radically transformed the instrument's sound, and listeners who are able to "get inside" that sound, as Young used to say back in Berkeley, find it endlessly fascinating.

Young says performing and perfecting *The Well-Tuned Piano* is "the most profound and satisfying way" he can achieve spiritual fulfillment. "There's a Sufi story I'm always telling which says that when God created the body, the soul didn't want to go inside. It was obviously a trap, the soul was going to be stuck inside this . . . cumbersome thing. And God used music to lure the soul into the body so that he could send the soul to earth to study music. The reason is that universal structure is created out of vibration, and you can best understand vibration through music. To me, *this* music reveals universal truths, spiritual truths concerning vibrational structure, that I am trying to share with the audience."

Young also argues that because all of the intervals in *The Well-Tuned Piano* can be represented by rational fractions, their "composite waveforms," or modes of vibrational structure, are repeated exactly from performance to performance, unlike the irrational intervals of music performed in equal temperament. And because they can be repeated exactly, he says, they will trigger the same moods every time. It would be difficult, to say the least, to validate this theory empirically, but Young does offer interesting evidence. In an upstairs room at Harrison Street, he has tuned six sine-wave generators to the opening chord of *The Well-Tuned Piano*. The sound of the piece is so novel that one has trouble recalling it after the initial impression has faded, but as soon as one approaches the upstairs room and begins to hear the chord floating softly under the door, something extraordinary happens. One begins to recall, in detail, the sounds and structures of the entire composition. This happens, Young suggests, because "one intuitively recognizes that information having to do with basic universal structure is coming in as sound."

To skeptics, such statements may smack of half-baked mysticism. But it is indisputable that Young has been one of the most innovative contemporary composers. His music, especially *The Well-Tuned Piano*, can evoke spell-binding moods that are too delicate and elusive to quantify. Unlike much of the work of the academic avant-garde, it is music that asks to be experienced, that seeks to produce an immediate, deeply felt sensation. Young was being youthfully rash but utterly in character when he announced in a 1960 lecture, "Once I tried mustard on a raw turnip. I liked it better than any Beethoven I had ever heard." □



# THE YELLOW BANANA

BY PATRICIA VOLK

“SEVEN MEN DIED MAKING THIS bridge,” Roy said as they swerved onto the Manhattan side of the ramp.

“You don’t know that,” May said.

“Actually,” Roy said, “it was seven and a half.”

“What do you mean, ‘half’?” She turned toward him in her seat.

“Well, part of one guy’s still down there.” He could afford to be silent now. Let her pull it out of him. He liked when he had information she wanted. He liked her having to ask.

“What do you mean?”

“Well, they were pouring the pylons. Somebody got sucked in with the cement. Part of him’s still down there.”

“What did they do with the rest of the man?”

“They took the rest of him to Our Lady of the Sacred Tear Hospital.”

“You made that up.”

“His name was Leo Asprey.”

“There is no Our Lady of the Sacred Tear Hospital in Brooklyn,” she said, bluffing.

They rode in silence, suspended over the East River by necklaces of lights. As they drove down the ramp, into Brooklyn, May thought the borough looked darker than Manhattan. The buildings were old and squat. There was no street life. The streets were named after people she had never heard of, obscure explorers and New World financiers.

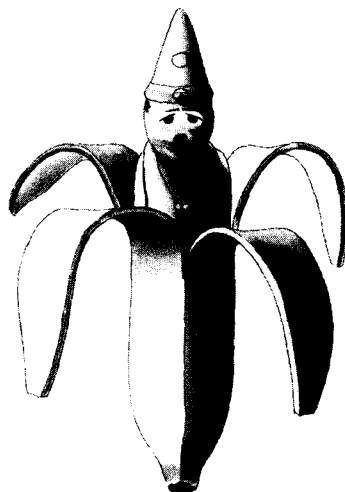
“I wonder if they buried your uncle with his leg.”

Roy looked at her as if she had gone crazy. “They get rid of it at the time of surgery. What are you talking about?”

“Oh, I don’t mean his *real* leg. I mean his artificial leg. Do they put it on him in the casket or not?”

“How should I know?” Roy said. Then, “But why should they? He won’t be using it.”

“You never know. They buried Tut



with all that stuff because they thought he’d need it in the afterlife.”

“Our people don’t believe in the after-life.”

“Well, wouldn’t it make it hard for the pallbearers to carry a coffin with uneven weight distribution?”

He didn’t answer her.

“How would it look in the coffin? There would be this, well, this sag. It wouldn’t look right. I mean, it would look uneven.”

“But everyone who came to the funeral knew he had only one leg.”

“That’s not the point,” May said.

He decided not to ask her what the point was. He preferred questions with answers, not hypotheses. He knew if he kept silent, there was a chance she’d be distracted.

“What do they do with the leg after surgery?” she said.

“Limbs are usually burned unless you request them to be buried.”

“I’m serious,” May said.

“So am I.”

“No, really.”

What, he wondered, did she *think* they did with them?

“You really want to know?”

“Yeah.”

“They sell them to McDonald’s.”

He had gotten lost in a turn off Atlantic Avenue and suddenly the stores had gone from upholsterers and children’s clothes to pig-part emporiums and voodoo parlors.

“Are we lost?” May asked.

“No,” Roy answered quietly. “Look for something that says ‘Flatbush Avenue.’ I think.”

They turned into a side street and he pushed the master lock button. All the doors clicked and she felt uneasy from needing extra security. What if a gang were to leap out of the dark with lead pipes? Would he have the sense to run them over?

“Are you angry that I wanted to go to Ettie’s?”

“No,” Roy said.

“I mean, I think your uncle would have liked it. Your family treats her so badly. At least you’re not ignoring her. She was an active part of your childhood. It only seems right to say you’re sorry.”

“I never liked her. She’s a pain in the ass.”

“Well, she’s old and she took care of Sussman for years. She was his nurse, practically.”

“She killed him.”

“What do you mean?”

“She talked him out of the pace-maker. She convinced him the surgery would kill him. Instead, his heart killed him.”

“Well, God,” May said thoughtfully, “I hope I never have to make that decision for you.”

“So do I,” he said, and smiled at her.

He liked the way she looked in her fox coat. So unconcerned about the cold. Not like the women in his family, who had always worn dark cloth coats that needed to be supplemented by buttoned-up cardigans and pilly scarves. Their hands were always busy clutching fabric around their throats, pushing down on knitted hats, shielding their breasts. But even on the coldest days May didn’t wear a hat. She let the wind flail her curly hair into a tangle beating against her eyes. She never even closed the coat. A long strand of pearls flew out in front of her, wagging like a metronome in time with her hips. “Here comes May! Here comes May!” A silk blouse was all that stood between

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her and the same cold his mother clutched against. She never carried a bag. Just stuffed change and credit cards in her pockets.

"Sit close to me," he said.

May undid her seat belt and slid over. He put his arm around her shoulders and let his hand slide down her breast. He felt heat spill into him. Sometimes the feel of a hard nipple was even nicer through silk. He wondered if she was reacting to him or the cold.

"Would you mind concentrating on the road? I don't want to die in Brooklyn." She shoved his hand away. "Besides, I think we're lost."

"No. This looks familiar."

"We haven't been here in five years." She paused. "You know what? I think this is a Yellow Banana."

"What's that?" Roy asked.

"A Yellow Banana is when something doesn't turn out to be what you expected it to be."

"Give me an example."

"Remember when Jo Ann recommended that Cuban restaurant and we went there on our anniversary and you got a Band-Aid in your soup and I got food poisoning from the batidas? That's a Yellow Banana. Remember when you paid \$140 for closed-circuit seats to a fight and the man got knocked out in the first round? That's a Yellow Banana. Looking for a place in Brooklyn that you have no directions for on a dark night in January, that could very well be a Yellow Banana too."

"You mean like the time the Gilchrist's told us to meet them at a Chinese restaurant on 83rd and Broadway and there was no Chinese restaurant on 83rd and Broadway?"

"That's a Yellow Banana. That's right."

"Why do they call it a Yellow Banana?" Roy asked.

"Because a Yellow Banana doesn't mean what you'd expect it to."

"You mean a Yellow Banana does not mean a banana that's yellow?"

"You got it."

"Look for a spot," he said. "This is it."

He pulled into a metered spot and May got out of the car and ran into the building. She knew it would take him three or four minutes to check out all the parking signs and make sure he wouldn't be towed or ticketed. She plunged her hands deep in her pockets

and sighed. How could she complain about him leaving dirty laundry on the floor when he was willing to read parking signs on sub-zero nights in Brooklyn? He entered the lobby red-cheeked and distracted, and she held his arm while they rode the elevator up in silence. They rang Ettie's bell and waited. The hallway was dark and smelled of fermented garbage.

"Who's there?" a strange voice said.

"May and Roy," Roy answered.

A police bolt jolted up from the floor. A lock turned. A chain jiggled and a slice of tall black woman looked out at them.

They heard Ettie's voice from inside. "It's all right, Mattie. You can let them in."

ROY AND MAY STOOD IN THE FOYER and let their eyes get used to the light. In addition to ceiling fixtures, there were floor lamps and table lamps everywhere. All the shades had been removed and the penumbræ from the bulbs made it difficult to find a place to rest their eyes. Ettie, dressed in black, scuttled sideways out of a hall, then turned toward them.

"So you came," she said. "Let me take your coats."

"That's okay," Roy said as they walked toward the living room. "We'll just throw them down."

He let his eyes take in the room. Sussman's chair was still where it had been five years ago, surrounded by two floor lamps and a table lamp. His leg was leaning up against the side. Roy was struck by how unbionic it looked. There was no attempt to make it look real, either. It was as if the prosthetist had no point of view. The artificial limb was a combination of wood—dark, yet faded, like the hull of a sunken ship—and leather and screws. Perhaps Sussman had ordered the economy model. That would have been in character, Roy thought. Sussman always prided himself on never living better than any man who worked for him.

Roy left the coats on Sussman's chair, beside the leg, and sat down on a small fringed and tufted wing chair. May squirmed on a settee, working her way around the lumps beneath the slipcover.

"We were so terribly sorry . . ." she started to say when Ettie interrupted her.

"You never came. He was so sick. We could have used you."

"What?" May said.

"How come you never came? Every day he'd ask me, 'Where's Roy? Why doesn't he call?'"

May watched Roy, wondering what he'd say. She had asked him the same question, many times.

"I want to remember him the way he used to be. I want to remember him strong," he had always answered.

"Well, what about me? When I'm old and sick will you abandon me so you can remember me the way I once was?"

"You'll just have to wait and see," he'd always say.

"It was terrible, terrible," Ettie continued. "And you never came. You never even called."

"I didn't know he was that sick," Roy said. "No one told me."

"The last time you saw him, he was in the hospital."

"Yeah, but I thought he was better. No one called to tell me he was sick. Why didn't you call me?"

"We didn't want to bother you. You should have called us. You want a drink?"

Roy shook his head.

"Does she want a drink?" Ettie pointed to May.

"No, thank you. We haven't eaten yet," May replied. "We're going out to dinner. Would you like to join us?"

"Our people stay home for a week," Ettie said. "Come on." She turned to Roy. "Have a drink. I want you to have a drink. You took all this trouble to come see me. Now have a drink."

Ettie stood up and began to walk sideways around the room. Slowly she made a wide circle. A bottle of scotch was on the floor, underneath a table. "I know I have a bottle in this room. Somewhere." Ettie let her hand drift over the bookcases and chair backs. She was stooped over, shorter than the last time May had seen her. Her hair, once dyed black, was stained purplish brown. She wore it in an upsweep, all the brittle ends trapped at attention under a net, standing straight up like a Buckingham Palace guard's hat, all the frizzy, old-lady hairs shaped into a torpedo longer than her face. She scuffled over the carpet in deliberately cut slippers, warped bones peeking out of scissored rents.

"I know it's here. I know I have a

bottle of scotch. Here." She picked a can off the coffee table and held it in May's face. "Have a hard candy." May put her hand in. The candies were unwrapped and sticky.

"I better not," May said, and withdrew her hand. "We're going to eat soon."

"Go ahead," Ettie insisted, waving the can under May's nose, and May reached in, removing a small, sticky green waffle.

May and Roy stared at the bottle of scotch under the table while Ettie kept looking for it. She began lifting the cushions off chairs.

"You could have called," she said. "What's a phone call?"

"Do you have a Kleenex?" May asked.

"Why do you want a Kleenex?" Ettie said, shuffling over to her.

"I'm crying."

"There's a box next to you. Help yourself."

May blew her nose and spit the green waffle into the Kleenex. Ettie stared at her.

"You like the candy?" she asked.

"Delicious."

"You think so?"

May nodded.

"Well, don't take any more. It'll ruin your appetite."

Ettie walked near the entrance of the living room, and for the first time May noticed the presence of a supermarket shopping cart, loaded with crumpled shopping bags, newspapers, and fruit.

"I know it's here somewhere." Ettie began taking things out of the cart and putting them on the carpet.

"You know, Sussman never understood why you didn't call. You should have called."

"In defense of Roy," May said, "I think you should know. No one ever told him Sussman was so sick."

Ettie turned to Roy. "What did she say?" she said, pointing to May.

"Well, now you've got to start taking care of yourself," Roy said. Ettie sat down. She seemed to have given up looking for the scotch. The carpet was littered with old newspapers, brown bananas, and paper bags.

"Yeah? You think so? That's what everybody tells me. I haven't had a vacation in years. Since he got sick. I've let myself slide."

"Look at me." She turned to May. "Am I a wreck?"

May studied Ettie's face. She had lost weight, and her skin hung down in dewlaps, crushed with wrinkles. The whites of her eyes were yellow, and some kind of surgery had been done on one lower lid: it looked as if a bite had been taken out of it. Her old teeth were brown. Her new teeth were white. The uppers went to the left, the lowers to the right. At the corners of her mouth, two whitish deposits had collected. They looked hard. May imagined they were composed of equal parts milk of magnesia and Breakstone's sour cream.

"I think a vacation would do you good," May said.

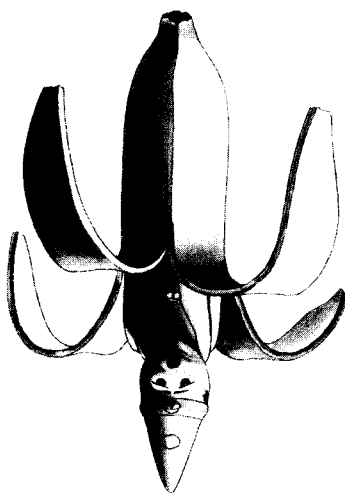
"Why don't you go south," Roy suggested. "Take a few days and go to Florida."

"Miami?" Ettie asked.

"Yes. That's a good idea. Miami."

"So you think I should go to Miami," Ettie repeated.

She began petting her torpedo, searching around the rim of the net for errant hairs, pushing and tucking. "I used to look a lot better. Why didn't you call, Roy? You could have helped."



Roy stood up.

"You can't leave without a drink. Have a piece of candy. You want a drink?"

ROY GOT THEIR COATS. HE LINGERED for a moment beside Sussman's chair, and May watched him let his hand gently touch the leg. They followed Ettie as she scuffled to the door and waited while she slid, unbolted, and turned the locks.

On top of the console by the front door, May noticed a glossy travel brochure for a round-the-world cruise on the QE2.

"We're so sorry," May said.

"You could have called."

"Let us know if we can do anything," Roy said. He led May down the hall to the elevator.

In the car they sat silently. May waited for him to speak first. She waited, then finally said, "She took good care of him for a long time."

"Sussman didn't die," Roy said. "He escaped."

When they got to a light, Roy looked out the window at a street sign and put on his directional.

"We are, at this very minute, two blocks from what is, quite possibly, the best seafood restaurant in all of Brooklyn. Nay, New York."

She didn't say anything. She sat looking quietly out the window. They drove that way, in silence, until Roy went through a yellow light, made a sharp right turn, and pulled into a spot.

"You know what they're famous for here?"

"What?" May said.

"Clam bellies."

"Clam bellies?"

"Clam bellies."

May remembered to smile. "And what do they do with the rest of the clam?" □



*An American biologist explains  
his controversial view that feeding starving  
countries will ultimately harm them*

# A CONVERSATION WITH GARRETT HARDIN

BY HAROLD HAYES

IT IS THE OPINION OF MOST OF US THAT THOSE WHO have food ought to try to help those who do not. No one, whatever his politics, wants to see anyone else starve. If it is possible to devise new ways of growing more food to feed those who need it (for example, through the Green Revolution) without depriving those who already have it, such steps should be taken.

Most believe that there is at present a population problem aggravating a world food shortage—that there are too many people now for the food available, and that the disparity is growing. The presumed solution to this is something people are vaguely aware of—the suggestion that helping out the less-developed countries, where the problem is greatest, will improve their economies. And as the gross national product of a poor country goes up, its population will go down, since people who are well off tend to have fewer children than those who are not. And with fewer people, the demand for food lessens. Meanwhile, and until this happens (as most of us believe), more food should be found to feed those who need it. In such fashion will the imbalance eventually be corrected.

This is the charitable view. In some places it is an ethical or religious view, and in others it is at least a political view. And since it reflects tacitly the announced policies of the major power blocs as well as those of the less-developed countries themselves, of the United Nations, and of both the haves and the have-nots, it is for all practical purposes the world's view.

In every respect, Garrett Hardin, of the University of California, believes it to be the wrong view. Hardin is an American biologist turned moralist. He derives his ideas from the principles of ecology, which he sees as the basis for viewing the whole of life—its beginning and continuing evolution, including the considerable impact made upon it by man—and as precedent now for salvaging what is left of its future. One biographical sketch describes him as a Republican, a Unitarian, and a father of four, affiliations that suggest (as does an accompanying photograph) that he is not as radical as he thinks. Rather, with graying sideburns and plastic-framed glasses, he could be a small-town, middle-aged minister trying to work more closely with the young people in his church.

Hardin, who was born in Dallas in 1915, grew up at various stops along the Illinois Central Railroad, for which his father worked, and was educated at the Uni-

*The material in this article will appear, in somewhat different form, in Mr. Hayes's new book, Three Levels of Time.*

versity of Chicago, where he came under the influence of the geologist J. Harlan Bretz, the philosopher Mortimer Adler, and the biologist W. C. Allee. He has taught and lectured at Stanford and other universities, and since 1946 has been a faculty member at the University of California at Santa Barbara. He is a prolific writer—the author of textbooks, books on ecology for a general audience, extracts, essays, and reviews—and is an ardent amateur violinist.

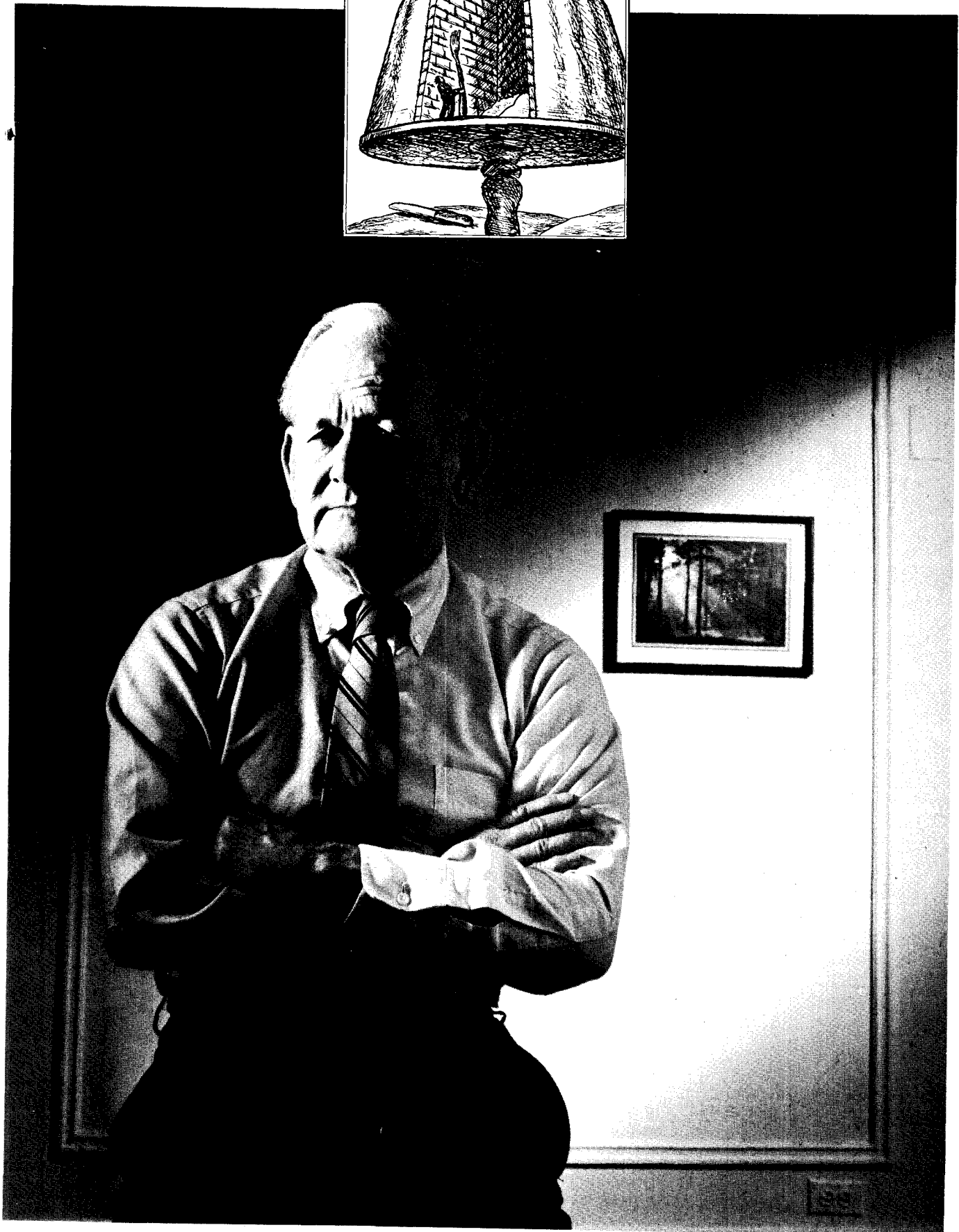
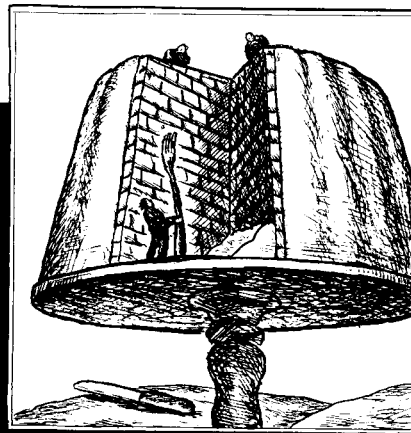
Before I visited Hardin at his house in Santa Barbara, all I knew of him was what I'd read, and his writing is tough, blunt, and to the point. I wondered if he would talk as tough as he writes. Although his references are eclectic, often witty, and sometimes technical, he is almost truculently plainspoken. Hardin is a provocateur who writes tough and intimately for a reason. Stringing along with his bull-shooting, you suddenly become aware that he has led you into a very grim paradox.

Hardin insists that the *worst* thing that can be done for a starving people who have exhausted their own food supply is to give them more food. This is a hard line—it is, in fact, a flat-out attack on the theoretically most human of all human attributes: the propensity for sharing.

Hardin's methods of carrying forward his attack are often as ingenious as they are exasperating. In one of his papers, "Carrying Capacity as an Ethical Concept," he cites the example of the nineteenth-century algebraist Karl Jacobi, who advised his students: When stuck, invert the problem; turning it upside down might shake the answer loose.

So, Hardin says, let us take a prominent example of the food/population problem: India, a hungry nation of 600 million people living off a decaying land with the carrying capacity for a population of 70 million. The question is, how can we help India? But, as evidenced by the fact that we have given food to India and Indians still starve, there has been thus far no satisfactory answer. Now the question, in Jacobi's fashion, is inverted: How can we *harm* India?

Hardin concedes that gifts intended to increase the sources of energy, added to the gift of food, might conceivably help such an impoverished nation to help itself—assuming the presence of an infrastructure to ensure proper distribution. But the infrastructure is missing. What can be done about that? Moreover, whereas there has been and may continue to be a surplus of food available in the United States for relief purposes,



PHOTOGRAPH OF GARRETT HARDIN BY ROBERT COHEN/ILLUSTRATIONS BY PHILIPPE WEISBECKER

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there is certainly no surplus of energy now, nor is there likely to be one within the foreseeable future. "To send food only to a country already populated beyond the carrying capacity of its land," Hardin writes, "is to collaborate in the further destruction of the land and the further impoverishment of its people." That is, so long as the resources are unavailable for helping the country to improve its carrying capacity, the assistance of food will do nothing more than swell the population and thereby accelerate disaster.

He gives as an example in the same paper, with his figurative population clock ticking away: "Those (1,000,000) who are hungry are reproducing. We send food to them (1,010,000). Their lives (1,020,000) are saved. But since the environment is still essentially the same, the next year they (1,030,000) ask for more food. We send it to them (1,045,000); and the next year they ask for still more. . . . it is . . . a growing disaster, not a passing state of affairs."

On the other hand: "Fifty years ago India and China were equally miserable, and their future prospects equally bleak. During the past generation we have given India 'help' on a massive scale; China, because of political differences between her and us, has received no 'help' from us and precious little from anybody else. Yet who is better off today? And whose future prospects look brighter? Even after generously discounting the reports of the first starry-eyed Americans to enter China in recent years, it is apparent that China's 900 million are physically better off than India's 600 million. All that has come about without an iota of 'help' from us."

Thus, the only way we can help India is beyond our means. A certain way we can harm it is to send it food.

Under the weight of justifying such conclusions, it is not Hardin's tone alone that seems odd. There are times when Hardin appears willing to try any gimmick to get his point across. In one of his books, *Exploring New Ethics for Survival: The Voyage of the Spaceship Beagle*, he encapsulates his holistic discourses within divided segments of a science-fiction satire. He has, and often takes advantage of, a copywriter's knack for titles ("Guk—Cycle or Sequester?"; "What the Hedgehog Knows"), and he has devised catch phrases in the effort to make his concepts stick:

"You can never do just one thing."

"Guilty until proven innocent."

"Not to act is to act."

"Thou shalt not violate carrying capacity."

Most of these maxims, deriving from the conjunction of evolutionary biology and human ecology, Hardin calls "pejorisms," a term he has coined to blanket their root assumption, which is that it is more rational to keep the world from getting worse than to try to make it better.

It is the horror of unrestrained human population growth that motivates Hardin. In the early forties, after several years spent researching the possibility of devel-

oping algae as a large-scale food source (a way to save the starving masses), he concluded that any such measure would only compound the problem. As the human population has come to double during his lifetime, he has become a dedicated Malthusian, persuaded that uncontrolled population is the ultimate offense committed by man against himself. In his *Beagle* preface (1971), such conviction prompted him to say (more temperately than in some of his other writings): "As a scientist I wanted to find a scientific solution; but reason inexorably led me to conclude that the population problem could not possibly be solved without repudiating certain ethical beliefs and altering some of the political and economic arrangements of contemporary society."

While Hardin's ecological views are conventional enough—he is anti-industrial pollution, anti-nuclear proliferation, and the rest of it—his polemics are not, and it is for these that he is chiefly known, for his role, as he sees it, is to insist that people now think about the consequences of ecological and other policy-oriented behavior. Thus, in many of the quarrels his work engenders, the argument is not with his science but with the new moral precepts he derives from it. Ecology is a political cause beyond conventional politics. In the early sixties, because it was consistent with his ecological ethic, Hardin became an outspoken and effective advocate of pro-choice abortion law. And in the early seventies, with what appears to have stemmed from dramatic instinct more than from scientific prudence, he began his campaign for the rejection of food aid to overpeopled nations.

**H**ARDIN IS KNOWN BEST FOR TWO ESSAYS, "THE TRAGEDY of the Commons" (1968) and "Living on a Lifeboat" (1974). Both are extended metaphors, for it is metaphor, he says, that is the best way to approach unsolved problems. The metaphor of "The Tragedy of the Commons" is built on the way farmers allot cows to a limited area of pastureland, and it shows Hardin's thinking at its most strikingly effective. Using commonplace references, Hardin shows how the world's political and economic systems have become vulnerable to ecological disorder, and powerless to avert ultimate disaster. The force of so sweeping an indictment comes from the simplicity with which it is made.

Spare (6000 words), cleanly written, and free of his occasional slangy abrasions, his essay has drawn little criticism, largely because the logic of "The Tragedy of the Commons" is so difficult to fault. Indeed, in a literature now moving swiftly beyond the boundaries of ecology into something altogether new—a sort of biopolitics—it is considered by many to be a small masterpiece. If ecology has become the unexpendable factor in viewing the whole of life, as Hardin maintains, responses to "The Tragedy of the Commons" would seem to bear him out. In the years since its publication, it has been reprinted in more than sixty anthologies within the fields of political



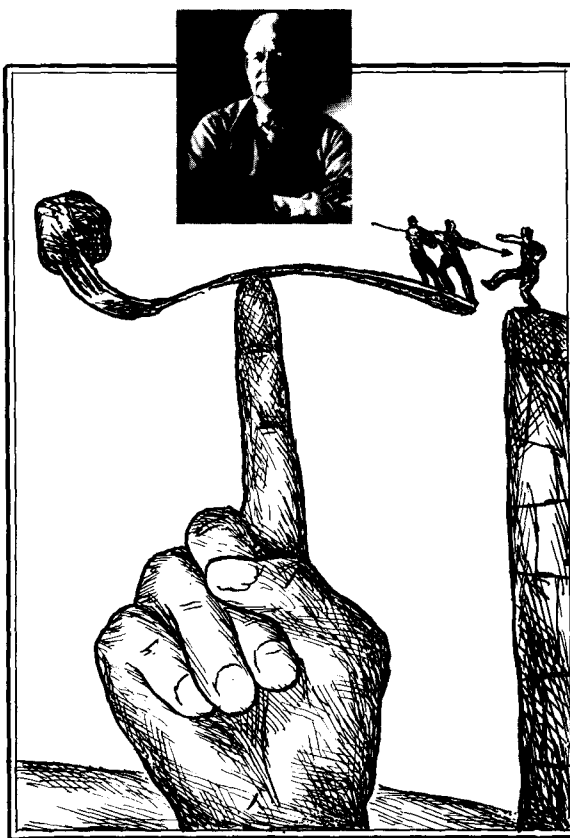
science, sociology, ecology, population studies, biology, conservation, law, and economics.

"Living on a Lifeboat" is Hardin's attempt to respond to the problems raised in "The Tragedy of the Commons." And it is the "lifeboat ethic" that has added infamy to the celebrity of Garrett Hardin. In its bleak reductions of the population/food problem (the metaphor here shifts from land to sea), the "lifeboat ethic" argues that you have a moral responsibility to do pretty much what you must to keep your own boat from sinking, and you ought to let the other fellow take care of himself.

For this aspect of his work, Hardin draws something more than conventional critical opposition. The recurring epithet, in fact, is "obscene." His essay and its "ethic" have been so described by, among others, Jean Mayer, the nutritionist, and the late Margaret Mead. But Hardin shrugs off the word by noting that it is defined as "offensive to accepted standards of decency or modesty," and adding: "Obscenity is, then, a relational term. It defines the relation of an idea to the standards of the speaker. It is an unacceptable relation, so we must always ask which needs changing—the idea or the standards?" However such distinguished enemies may vilify him, Hardin is willing to repeat over and over what he believes to be a new and cruel truth emerging for the human species: "*For posterity's sake, we should never send food to any population that is beyond the realistic carrying capacity of its land.*" The preservation of the present is not what concerns him so much, he insists, as the rescue of the future.

AT THE TIME APPOINTED FOR MY VISIT, I AM LED BY Mrs. Hardin past their house to a sun deck within what seems to be a sort of compound, much of it overrun with a laissez-faire mix of garden plants and dry bush—the fuel for seasonal fires, which, at this moment, to the east, are sweeping the suburbs of Santa Barbara. Pepper plants in wooden boxes are posted at the corners of the deck, and off to the left, a glass-walled building contains a swimming pool. Hardin's study is in back of that, and after a few minutes he emerges from it, seated in a wheelchair (he had polio as a child), an open, friendly, you-and-I-are-already-pals smile on his face.

Soon enough it becomes impossible not to accept him



on such terms. He offers me a pepper freshly picked and picks one for himself, and as we munch together we start talking about the food Garrett Hardin has condemned—tuna tainted by mercury, meat and vegetables befouled by pesticides—and the food Garrett Hardin prefers. What does *he* eat?

He takes a bite of pepper and weighs the question. "I'm trying to think of anything that I *don't* eat—that I'm really worried about. At the moment I can't think of anything."

"Not even tuna?"

"Oh, I've changed my view somewhat about that. For a person my age, the quantities of mercury are not terribly dangerous. I wouldn't feed it daily to small children—once

in a while, maybe. With all these things, I think the idea of zero tolerance is a mistake. In general, you have higher standards for young people than for old," he says, "because their life is going to go on a lot longer." Still thinking about it, he grins, nibbling his pepper. "I appeared at a congressional hearing on food and population at which I said that as a result of overpopulation we have many losses that most people don't know of. A very peculiar moral problem. If you don't miss it, are you missing anything? For example, our standards for sweet corn here are that we don't pick the corn until the water's boiling on the stove. See the corn growing out there on the other side of the orange trees?" He points across the scrub bush, where, rising behind the flowers and weeds, there are indeed several rows of corn. "I love the taste of fresh vegetables. By the time corn is a day old, you might as well just throw it out. But the vast majority of people in the U.S. have never in their lives really tasted sweet corn. Those poor devils in New York City! The market system simply can't get it to them quickly enough."

"We're a fruit-oriented family," he goes on. "As for the insecticides, we use virtually none of them in our garden. We figure that's just a tax we have to pay. The insects take theirs, we take ours, and as long as we don't have too much population, we can afford to do it. It's when we start grasping, want to get every little bit for ourselves, that we begrudge the insects their toll. We have birds peck into our fruit, and we try to raise enough so that they can have theirs and we can have ours, too. We like to have the birds around, but they're just hell on wheels on the apricots, damn them!"

IN 1968, AS RETIRING PRESIDENT OF THE PACIFIC DIVISION of the American Association for the Advancement of Science, Hardin first went to work on his now famous metaphor of the commons, in an address he called "Not Peace but Ecology." Earlier, he had found a paper by an obscure nineteenth-century English mathematician, William Lloyd, that reduced the concept of carrying capacity to its most appropriate starting point—a community pasture, or "commons." Hardin incorporated Lloyd's perception, adapting it to modern times. "I had a hard time writing it—I wrote at least seven significantly different versions, because I didn't like my conclusions. I was doing everything I could to escape them. But I couldn't. It was terribly long. Generally a person who's troubled says too much."

He sent the speech to *Science* magazine, where "it disappeared into the maw of refereeship," he said. "Two months later I got a note—your paper is accepted. It's too long. I realized I had *two* papers, so I took a pair of scissors and cut across the middle. The second part was 'The Tragedy of the Commons.'"

The outcome, the 6000-word essay that has now been so widely collected, is so tightly written that any attempt to paraphrase it is hazardous. But Hardin, who tends often to restate his ideas in various forms, has paraphrased himself. In *Exploring New Ethics for Survival*, he briskly sets forward Lloyd's original perception about the commons:

Very well: I am a herdsman using the commons. It has a carrying capacity of 100 cows. At the moment it happens to have 100 cows on it, of which 10 happen to be mine. Now I have a chance to acquire an eleventh cow. I wonder if I should do so. I debate the decision with myself in roughly the following way.

If I add one more cow to my herd that will make a total of 101 on the commons, which is one too many, and so all of us will lose a bit. On the other hand, 11 cows is 10 percent more than 10 cows, so I gain. The over-all loss I would estimate at about 1 percent, and that is shared among all us herdsman. *My* gain is about 10 percent, and I don't have to share it. Clearly I stand to gain from adding one too many cows to the commons, so I shall do so.

And in a speech on Earth Day in 1970, at the University of Illinois, he went on in even more informal fashion to project the consequences:

But this same sort of reasoning implies also that [I] should add two more, and three more, and four more, and so on, without limit. The same type of reasoning is used by every other herdsman. The result is that they all add more to their herd, and destroy the commons through overgrazing.

Now the important thing to notice about this is that each man is behaving rationally; each man makes a rational decision when he adds to his herd . . . And yet the final consequences of all these individually correct decisions is complete destruction of the commons. Since they are all locked into this system, since they cannot avoid this, I

speak of their situation as a *tragedy* of the commons. A tragedy is any course of events which individuals are powerless to prevent, so long as they play the game by the rules.

This insight of Lloyd's explains why it is that private property is superior to commons in a crowded world. Under a system of private property where each herdsman owns the pastureland on which his cows graze, the individual is responsible for what happens. He has an *intrinsic* responsibility, because if he makes the wrong decision he's going to suffer from it. He's going to destroy his own pastureland, whereas when the pastureland is shared by all, he does not have that intrinsic responsibility and essentially his responsibility is zero. As a matter of fact, you might say it's worse than that in the commons because he actually has to gain by mistreating the commons.

This type of analysis is needed to call our attention to the fact that in terms of their pure forms there are really three basic political systems and not two, as we're usually led to believe. We're usually led to believe that the only choices are private enterprise and communism. But you see, the commons is a system utterly different from either one of these, and is really worse than either.

We need to label this type of a system with a name so that we can speak of it, so that we can discuss it intelligently. And until we do get this label, people are going to continue to suffer from verbal pollution, continue to be misled by improperly used words.

For example, I am sure all of you have seen at some time or other an advertisement showing a fancy, electronically equipped ship plowing through the ocean with all sorts of gear for catching fish. This ad includes a statement of this sort: "Feeding the poor of the world from the inexhaustible wealth of the seas through the benefit of American private enterprise."

Now that is a bunch of crap. In the first place, we don't feed the poor of the world. Only 17 percent of the fish from the oceans go to the poor countries of the world (and even there they probably go to the wealthy people). Yet the poor countries constitute 67 percent of the world. That's the first falsehood in the statement. The second falsehood is that the wealth of the seas is "inexhaustible." This is not true. We have heard before of the inexhaustible wealth of the American forests, of the inexhaustible game on the American prairies. Every one of the inexhaustibilities has been or is being exhausted.

The same thing is true for the oceans of the world. Though at present cropped only to about a third of the extent they could be, the oceans also have limits. The wealth of the oceans is *not* inexhaustible.

The third falsehood is that the harvest is being reaped through the glories of American private enterprise. The exploitation of the oceans is not a matter of private enterprise; neither is it communism. Oceans are being treated as a commons. All of us—Americans, Russians, Japanese, Peruvians—everybody who's out there in the ocean getting fish out of it is exhausting the commons, and we are all locked into a system that has no end except tragedy. There is nothing we can do, each one of us acting rationally, except exhaust the wealth of the oceans. Then we will all be worse off than we are now.

The only thing we can possibly do is to change the rules, and no doubt some day we will. At the present time we don't see how to, principally because we have no international organization to make rules that we will accept. So, in the meantime, all of us are playing out this game of the tragedy of the commons in the oceans of the world.

In his more formal presentation, Hardin argues that the commons has become something people put things into as well as take things from. The commons is the air we breathe, polluted by chemicals and atomic radiation; the world's soil, infested by pesticides; the finite spaces, overwhelmed by people. "Freedom in a commons," Hardin maintains, "brings ruin to all."

How, then, can we curtail this freedom?

"I think it was my daughter's criticism that led me to introduce in the original paper the phrase 'mutual coercion mutually agreed upon,'" Hardin says. "I was trying to soften the blow. But it bothered me then and it bothers me now. It disturbs other people, too, and I think rightly so."

"Coercion being the forcing of change?"

"Yeah, that's right. As it is now, the family will control the number of children wanted. It turns out on the average that the number is too high. And why should what various families want, by some happy coincidence, turn out to be exactly what the community needs? There's no law of nature that says their perception of their own well-being is exactly consistent with the community's need—there's nothing to *make* it work. So there has to be some sort of pressure. Community pressure. And then the question is, what kind of community pressure?"

"You're talking about a loss of individual responsibility?"

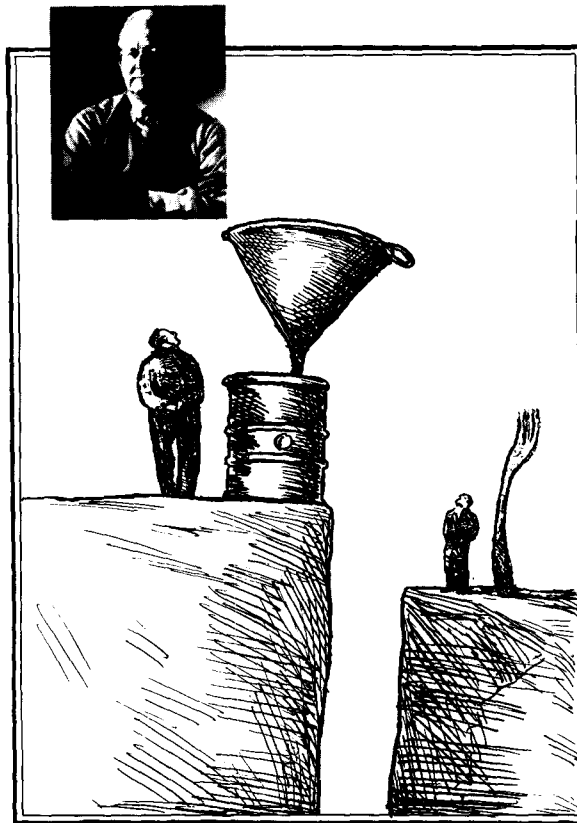
"I don't like that word," Hardin says, frowning. "I use it in a different way. I say the first thing a person is responsible for is taking care of himself."

"But you start with a man who knows what he has to do to raise his cattle . . ."

"They all suffer if he makes the wrong decision," Hardin says.

"Then he has a direct relationship to that suffering."

"He has a direct relationship to the gains, but an *indirect* relationship to the suffering. Put it another way: If he's one of a group, then his losses are shared by the



whole group. But by the definition of the rules of a commons, the gains come entirely to him, and *the losses are shared*. So that's why he's trapped, even though he knows that what he's doing is rotten. This is the situation with the whaling industry now. The Russians and the Japanese know what they're doing, but they're helpless to stop it."

"But isn't the first problem for them to admit responsibility?"

Hardin thinks for a moment, searching for—what? Another metaphor? "In a recent book I propose the cardinal rule of policy"—it is to be, I sense, another pejorism—"and that is: Never ask a person to act against his own self-interest. The most you can ask

him to do is to join with you and others in passing a law restricting *everybody*. So it doesn't depend on the individual's conscience. Because if you do that, you reward the conscienceless people. Conscience doesn't work. In order for it to work there has to be an impossibly high standard, one of perfection—*literally everyone* must be ruled by conscience. If even one person in the community follows a lower standard, that person prospers at the expense of the others. So the most you can ask is that a law is passed restricting everybody. The freedom of everyone else threatens my freedom; I therefore agree to legislation that restricts the freedom of everyone *including myself*. Mutual coercion mutually agreed upon! In the meantime, my conscience doesn't bother me in the least."

"So if your automobile lacks fuel-emission controls, even when they are available, you won't put them on?"

"I'll *vote* for fuel-emission controls, but I'll not put them on my car unilaterally."

THE PRESENT TROUBLES BEGAN, HARDIN WROTE IN THE "Commons" essay, 200 years ago, with the laissez-faire ideas of Adam Smith: By looking out for himself, the individual turns out to be promoting the public interest, whether he has intended to or not. The illusion that has come down from Smith's ideas is that all progress is good. Present-day industry, producing whatever it can sell without regard to the consequences, is supported in its destructiveness by this illusion. Technology has become the unwitting enemy, its cost accruing in debits of pollution, resource exhaustion, nuclear hazards.



Technology, Barry Commoner has pointed out, has broken free of the cycles of nature. Energy-intensive technology has shifted people from soap to detergents, from natural to synthetic fibers, from wood to plastic, from soil husbandry and land care to fertilizer as the means of increasing agricultural production; and the spread of synthetic chemicals has grown beyond measure. In the West, technology has shifted people toward a new order.

A by-product of this shift is the widely held assumption that technology can solve any human problem. If there are too many people, technology will find the energy and food to provide for them. If more corn is needed, more will be grown. If the oil runs out, there is nuclear fission, and if that doesn't work, nuclear fusion will.

Ecology, which challenges progress, is a cause for dispute among scientists—life scientists against the scientists of technology. I ask Hardin how the lines are drawn.

"Ecology focuses more on the system," he says. "It is the exponential law of biologists against the inverse-square law of physicists. Physicists, who were until recently seen as highest in the pecking order of scientists, made progress by simplifying systems—by eliminating the insignificant. But to the biologist, nothing within a system is insignificant."

In *Exploring New Ethics for Survival*, Hardin discusses the word "exponential," with its overpowering implications. "A single bacterial cell lands on the lining of the throat of a man. Does it matter?"

"A Newtonian physicist, after determining that the bacterium weighs only  $10^{-18}$  times as much as the man—only 0.00000000000000000001 as much—would dismiss the event as inconsequential.

"A biologist would not. He would ask first, 'Is it alive?' If the bacterium is alive and capable of reproducing on the lining of the throat, the population of its descendants may double every 20 minutes. In 4 hours there may be 4,096 cells; in 8 hours 16, 777,216; and in a day . . . well, in a day, if the cells could keep up so brisk an exponential rate (which they cannot) there would be more than  $10^{21}$  bacterial cells in the man, and the aggregate weight of them would be 5,000 times that of the host. (Now we see why the exponential rate of increase cannot be maintained.) All this from only one cell . . . increasing exponentially."

All well and good. But are such sensitivities sufficient to form an ethic? And so harsh an ethic as Hardin proposes? If man is a moral animal, what can be moral about an ecological ethic? Hardin's answer lies in the evidence derived from the systems of living things—in the behavior of populations of many species. Food encourages reproduction until all the food is gone—but once it is *all* gone, when the capacity of the source to renew itself is exhausted, not only the starving lose but the future as well. The essence of the ecological ethic, he asserts, is that it pays attention to posterity—"to our grandchil-

dren, everyone's grandchildren." Hardin is far from the dour doomsday prophet much of his work would suggest—nor is he, he says, hopelessly pessimistic about the possibility of corrective action stemming from an aroused, and informed, public opinion. He cites the shift of attitude in this country toward anti-abortion laws as an example of a revolutionary turn in social and religious conventions occurring within only a very few years. It is not too late for things to change.

He is still working out the lifeboat ethic, but he is less sure of his ground here. What I must understand, he says, is the meaning of carrying capacity. Hardin is at some pains to describe it to me now in detail:

"Carrying capacity is defined as the maximum number of a species that can live in an environment without degradation of the quality of life for that species indefinitely into the future. For most species, it's so hard to know what the total life-style is, it is difficult to measure. You have to make allowances for the fluctuations in the environment, so that you allow a safety factor by calculating that the actual number is always somewhat less than the apparent maximum. But you can *deduce* the carrying capacity inversely by looking at the environment.

"If the environment is becoming degraded," he goes on, "you can assume the species has exceeded carrying capacity. For example, the deer in Wisconsin. If you find that the trees are being eaten higher and higher by deer in the wintertime, and the young trees are dying because of excessive browsing, then you can say the carrying capacity has been exceeded. So we had better kill some of the deer. It's hard to determine it directly, but with that qualification—measuring inversely—you can establish the carrying capacity with a reasonable degree of accuracy for all animals—except man.

"Here, the complication is that for the past two or three hundred years, technology has been increasing the carrying capacity of the environment, which has caused us to pooh-pooh the idea of carrying capacity altogether. It is obscured, of course, and this is the dreadful thing about technology. Over here—in the West—we have been so good at it that the rate of agricultural improvement has been 3 or 4 percent a year for the last fifty years. Fantastic! But it would take only a little shift to cause problems that could become exponential. Look at India, for example, where the land has been so badly treated. Every tree along the road south of Madras has a scalped place on it, with a license number, to make sure it isn't cut down. When nightfall comes, people snip off twigs for fuel. In Kashmir, they are making charcoal out of leaves. It makes piss-poor charcoal, but that's what people do at the last, when they're grabbing onto anything."

ASK HARDIN FOR HIS EXPLANATION OF WHAT SEEMS AN impossible biological conundrum: How can it be that we as animals, evolving out of the animal kingdom, have lost the capacity to adjust to environment?

"There is nothing in any other animal species that corresponds to policy," he says. "So there can be no concern with death. So you have your wildebeest herds in Africa, which suffer periodically such large losses, and so what the hell? They have no power to control their numbers. And for most species out there, most of the time, death comes as a result of predation either by macropredators—lions or tigers, for example—or by micropredators—disease organisms. We've created *our* problem because we've gotten rid of almost all of our predators."

"But this is only recently, isn't it?" I reply. "We have been in balance until our own numbers took off. You've written that if the human world

was a smaller sphere, there would be no problems—with technology or anything else. Within the natural laws of other forms there is not a conscious or willful ruling of how many there are to be—things are worked out by the laws of nature rather than of consciousness. So mustn't you say that man has moved away from the laws of nature in this respect?"

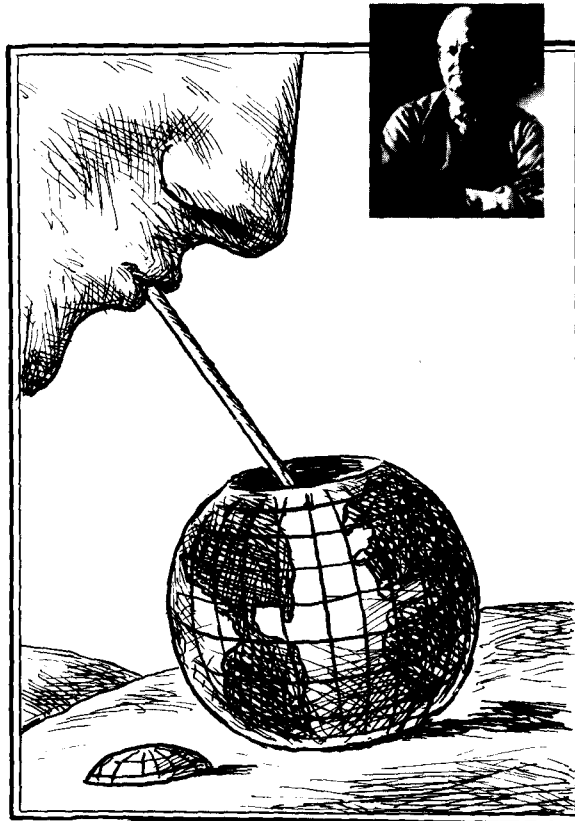
"Only in his refusal to augment death control with sufficient birth control," Hardin says.

"Richard Leakey writes that ours is a species failure . . ."

"To date it is a species failure. I don't think it is a necessary one, nor that it has to continue. It's more true of our part of the world than any other. For us, anybody who prevents a human death is regarded as deserving a first-class hero's medal. This isn't true of all cultures; many regard death as far more of a friend. With us it is very strongly a Judeo-Christian thing, I think, and maybe the two together make it worse than either alone. Tertullian, in the third century, one of the principal founders of Catholic philosophy, believed that disease and war were natural things: we need them to have a lopping off of the superfluous branches of humanity. We no longer believe that we need disease and war, but Tertullian did, and he was a Christian."

How, then, as an evolutionist, does he feel about the immediate future of our species?

"I think we're in a momentary situation of temporary insanity. We seem to think that the species can be saved only if every individual life of every member of the species is saved. And when you couple that now with the



'right' that is being expressed in the United Nations—the 'right' of each family to determine the number of children that it wants—when you put those two together, you have just an inflammatory mixture."

"So all of it in your view comes down to this disregard of carrying capacity?"—a cue for him to continue the discussion of his ethic, which he takes up, seemingly not disturbed in the slightest by the overtones of what he has said.

"But another thing enters with the carrying capacity for humans. You have to define it in terms of the quality of life you want to live. An easy example is eating meat versus not eating meat. Because of the ecological 'tithe,' as we call it, ten pounds of vegetable

matter are required to produce one pound of animal matter. If you want to eat meat, the carrying capacity of your environment is not as great. So we have to ask, carrying capacity under what standard of living?

"And *that's* part of the problem. Very quickly you get into an argument about values. Automobiles, radios, TVs, and so on. If you didn't have such things, you might carry a few more people in your environment.

"So a very real question is: Is God giving prizes for the maximum number of people? Most people, unfortunately, act as if He is—as if it were our purpose on earth to produce the maximum number of people. For what end? Nobody explains why it's better to have 10 billion people than 2 billion . . ."

"So then it is population that concerns you most?"

"Yes. Because increased population growth at the present level of human existence increases the magnitude and keenness of *all* the other problems. That *wouldn't* have been true 200 years ago, but we've now reached the point where I don't know of a single thing we could do that we could do better if we had more people. Whereas, I know many things that we would do worse. Such as having fresh corn."

"So if your ethic is predicated on there being too many people and too little food, what do you see as the solution?"

Again, he corrects me. "I wouldn't merely put it at too little food. But too few resources of all sorts—food, energy, amenities. Which brings us back to the problem of responsibility and power. If a nation asserts that it has sovereignty over its own affairs, including its own repro-

duction, then the rest of the nations should insist that this sovereignty carries with it responsibility for survival. In other words, if the people of a nation produce too many of themselves for the carrying capacity of their own land (living the kind of life they want to live), and then appeal to us, say, to bail them out, to send them food, send them energy, we should simply ignore them. Sovereignty means *responsibility*."

Hardin raises the example of China as an ecological model, although he professes to know very little more than what he has read about it in the press. Instead of national coercion in forcing people to conform to their environment, there is community pressure. Within a community of up to 30,000 people is the squadron of a few hundred, which is the basic unit of responsibility governing the lives of the commune's members. Hardin has little interest in ideological differences; Russia and the U.S., for example, are equally backward in ecological awareness. The diversity of cultures is what he sees as the optimum condition for the survival of the species. "It would be better if we were even more separate than we are now. Many people want us to make one big culture worldwide. We're not wise enough. Let's have many, pursuing different value systems, and let some of them fail—an object lesson to the others. The greatest mistake we could make, I think, would be to adopt the idea of a universal declaration of human rights. That can be reciprocal. The ideas of others are different from ours. I wouldn't be surprised any day now if one of our chief executives decided, as a result of prodding from religious groups, that polygamy shouldn't be tolerated in other countries. Since you can't be sure you have the right answer, you should be a little bit humble about such things."

"But what, then, of the problem of introducing birth control into countries whose cultures are built around large families? The population problem is in the Third World."

"You can't do it. All we can say is, Here are the external conditions you'll have to meet. No handouts. If your people are starving, we'll do nothing to save them. We should give *information*, of course, as much as is desired. We could say, By the way, we happen to know some rather neat methods of contraception, in case you'd like to use them, but it's still *your* problem."

**H**ARDIN'S USE OF THE LIFEBOAT METAPHOR TO SUPPORT his arguments is simple enough. The carrying capacity is marked on the boat—forty-four, say, for safety; fifty, maximum capacity. In extending the metaphor, he applies it to nations in terms of their relative wealth. "Approximately two-thirds of the world is desperately poor, and only one-third is comparatively rich. The people in poor countries have an average per capita GNP of about two hundred dollars per year; the rich, of about seven thousand dollars. [For the United

States, it is nearly nine thousand.] Metaphorically, each rich nation amounts to a lifeboat full of comparatively rich people. The poor are in other, much more crowded lifeboats. Continuously, so to speak, the poor fall out of their lifeboats and swim for a while in the water outside, hoping to be admitted to a rich lifeboat, or to benefit from the 'goodies' on board. What should the passengers on a rich lifeboat do? This is the central problem of the 'ethics of a lifeboat.'"

While the exact limits of the carrying capacity of any nation may be unclear, certain shortages enable us today to see that *most* carrying capacities are being exceeded. Where oil is concerned, as he says, it is clear that we no longer have enough. "We have been living on capital," Hardin warns, "in the form of stored petroleum and coal, and soon we must live on income alone." With food, a rampant plant disease may destroy crops; we are obliged to maintain some reserve as a safety factor.

"The fifty of us in the lifeboat see a hundred others swimming in the water outside, asking for admission to the boat, or for handouts," Hardin has written. "How shall we respond to their calls?" The only legal precedent has to do with actual lifeboat situations, in which those aboard who, to survive themselves, refused to take aboard the drowning were excused. For those who feel this may be unjust, Hardin adds coldly, "The reply . . . is simple: *'Get out and yield your place to others.'*"

"But can you then extend your lifeboat ethic to suggest that this is what every nation should do?" I ask. "Don't you presuppose parity of some kind among all the nations—that everybody has something that everybody else wants?"

"No. The carrying capacity is the property of the environment, *not of people*. The Galápagos Islands have something like 4000 people on them. They shouldn't have 2 million. If a place has too many people, it has got to cut down. If any country wants to accept some immigrants from Tanzania with its 14 million, fine. But if not, that's Tanzania's problem. Each country has to regard its carrying capacity as a fixed limit that it has to adjust to. That is its responsibility."

**D**ESPITE ITS LOGIC, HARDIN'S ARGUMENT FOR human intelligence (birth control) over animal fate (death control) remains harsh to the point of sickening horror—perhaps all the more so because the man before me, moralizing congenially in the balm of the California sun, has accepted so resolutely the consequences of his own analysis. Without prompting from me, he continues:

"I think our only chance of survival is to say it is quite within the rights of any nation to refuse to take aboard other people. The fact that they are starving has nothing to do with it. When all those people were starving in the Sahel several years ago, many suggested that the neighboring countries should take some of them in, but they



# NIGHT BLOOMING FLOWERS

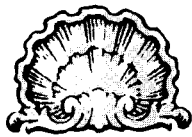
BY KATHA POLLITT

In the vacant lot behind the hospital  
where rainbeaten trash, smashed bottles, gutted bedsprings  
sprawl in a flyblown drowse among cinders and slag

how suddenly  
dusk takes on strangeness that is more  
than blue air and the blue

transient aspect of things.  
Look at the ground now, how it pales and glows  
as one by one, night wakers—

catchfly, dame's violet, evening lychnis—  
petal by petal unfold their secret hearts  
and lift to the moon a whiteness like the moon.



Why does such candor move me  
more than these failed acres?  
I have cherished my refusals,

I have loved them  
as if they were love. I stand,  
as in the nineteenth-century photograph

the women of the house, four generations  
in formal black as for a great reception,  
stood breathless, hushed in the shadowy conservatory

while under its glass dome  
the Night Blooming Cereus  
strained its whole being to an inward rhythm

stiffened its thick stalk  
and pulsed out its one flower  
huge, fleshy, heavy-scented, glowing, green . . .

and later little Alice Emmeline  
was carried upstairs by her father, half asleep,  
not understanding what it was she'd seen  
but trusting it, a mystery that would keep.

didn't suggest it in a very loud voice. Because if they did, they knew the question would be: Well, why don't *you*? Nobody did, and I think the world recognized then that no neighboring country had such an obligation. A sovereign country is responsible for its own survival. I think this is the best approach, and a humane approach."

I quote some of his writing back to him: "You say, in three different places, that for posterity's sake we should never send food to any population that has exceeded the realistic carrying capacity of its land; you say that food shouldn't be given without attendant population-control measures guaranteed; and you say that food shouldn't be given without supporting grants of energy. So what you say"—and I come down hard on it to be certain I have his position clear—"is that in effect there is not going to be any food given to anyone."

"In practice it would usually turn out that way," he replies. "Though as a matter of principle you should insist that we would like to help in all three of those ways."

"But what would it do to the people of the West, within the traditions of humanitarian values that have come out of our own cultural evolution, to make such a judgment when other people are literally starving all over the world? Say that they do *not* perceive such action in the benign terms you argue—that it's for the sake of the people of the future—but they simply accept it as another policy. What's all this got to do with me? one might wonder, turning on the television set. One is either going to resent the policy terribly, and feel the guilt of inaction, or simply become indifferent. In either case, isn't this the equivalent of genocide?"

He doesn't flinch, but he doesn't look very happy, either. "I think that's a good criticism," he says. "On the intellectual side, I think the carrying-capacity analysis is a correct one. But in terms of *selling* people on the realities . . ." It is an odd verb to use. "I think this has to be done—and this is not dishonest. It's part of the problem of seeing it all in terms of the quantitative relationship.

We are incapable of doing what we would like to do. The quantities involved are so tremendous."

"And you believe the principal difficulty in persuading people to your thinking has to do with their understanding of the population problem in quantitative terms?"

"Take the latest manifestation of the problem here in the United States," Hardin says. "The yearly natural increase of the American population, of births minus deaths, is about 1.6 million. Mexico, with about one *third* of our population, has a yearly natural increase of 2.6 million. In other words, the Mexican population is increasing five times as fast as ours. Now we can argue, for humanitarian purposes, that we should take in 2.6 million Mexicans every year. Apparently about half that number *has* been coming in over recent years.

"The question is, what will this do to us? It will increase our own rate of population growth, the stress on the environment, and so on. What will it do to jobs? And will it really make Mexico's situation any better? Of course, it *won't*. We will have the same problem each year. So people have to become convinced that we really can't do this. You've got to get that point across. I think it's the impossibility argument, in terms of quantities, that will influence people most, not the larger, intellectualized argument of carrying capacity. 'Posterity' is a pretty intellectualized concept." He seems to be running down now, and, for the first time, his scrappy tendentiousness seems to fail him. Hardin writes tough because he thinks tough, I realize. How he feels is something else.

"Here I'm not a very good guide," he goes on. "I'm too far from the position of the rural huckster—the person who really sells things to the public. I don't have a keen enough instinct. Probably, if someone came along who could do it, it would be done by means I disapprove of, that I regard as blatant, cruel, bad form. I don't know what will happen . . ." He is quiet for a moment. "And this does disturb me. I'm trying to keep it on an intellectual level." □

# THE WINES OF THE GREAT PLAINS

BY CHARLES VARON



THE PALATES OF connoisseurs throughout the world are finally discovering the wines of the Great Plains of the United States, about which I have been raving incontinently for nearly eight years. However, the fact that others have jumped on the bandwagon shall not keep me from describing these choice wines once again. Every field has its johnnies-come-lately, and I suppose oenology is no exception. One can but deplore them, abide them, or ignore them. I choose to ignore them.

On, then, to the fine whites and reds of the Great Plains shatoes. The variant spelling of "*châteaux*" is peculiar to the wineries of the Great Plains Vintners Association, whose founder, Lefty Carr, a retired minor-league baseball pitcher, "spelled the word like I heard it." Winemakers in the region take a certain pride in the variant spelling.

Three varieties of white deserve particular attention this season. For starters, there is the Topeka Harry, a nutty table wine that at \$1.09 a half is indeed a bargain. Made from a special grape developed by Topeka Vineyards, it has surprised me year after year with its improved flavor, bouquet, and nuttiness. Not even a Lafitte-Rothschild can challenge a Topeka Harry white for sheer nuttiness.

Topeka Vineyards has also introduced a new white—a fruity, almost sweet offering called the Topeka Harry Jr., which at \$1.29 is only a bit higher than the Harry proper. (These two wines are named after Harry Bernstein and his son, Harry Bernstein Jr., of the Bernstein family that owns Topeka Vineyards.) The Topeka Harry Jr. carries an aroma that, when it wafts to one's nostrils, almost magi-

cally entices them—no, *seduces* them—to taste this wine. On more than one occasion I've made a mess by pouring the wine directly into my nostrils; recently I asked the Messrs. Bernstein to include a warning about this allure on their label.

From the Shato Don Jones in Des Moines comes an offbeat white known as Great With Fish, which I first tasted four years ago and have grown to like more on subsequent tastings. It is premixed with a small quantity of an unspecified American soft drink and intended as an accompaniment, obviously, to seafood. It goes for 89 cents a half. I guarantee this wine will surprise you: it isn't for everyone, but it does have a distinctive tingle, and may be just what you need to complement salmon amandine or one of the frozen offerings by Mrs. Paul's.

BEFORE I GET to the reds (which have also enjoyed a good season), a few words about the history of the Great Plains vineyards. The region was thought unfit for growing grapes of any sort until Mr. Carr arrived and began what was for a decade essentially a one-man struggle to make winemaking a reality there.

Lefty Carr had bounced around the minor leagues of American baseball in the forties and fifties. While he had good speed in his early years as a pitcher, Mr. Carr never had sufficient control; he walked an average of nine batters per game, or one per inning. His sinker and curve were unexceptional.

On a check through my baseball records (I am an avid fan and usually take a cheap chablis to the stadium), I found that I saw Mr. Carr pitch on one occasion—in El



ILLUSTRATIONS BY MEL FURUKAWA



Paso, on a hot, humid afternoon in July of 1952, toward the end of his career. My scoresheet shows that Mr. Carr came on in relief with two on and one out in the top of the eighth. He pitched to two batters, striking out one but yielding a home run to the other, which ultimately cost his team the game.

Mr. Carr left baseball the following year. During his last few seasons, as it became only too clear that he would never play on a major-league team, he began to appreciate wines. "I tried all of them," he says. "All of the cheap ones, that is."

But the burly southpaw found none of them, in the end, satisfying. "They were pretty darn vile, as a matter of fact," Mr. Carr told me in an exclusive interview recently. What appalled him most was the noxious aftertaste in these economy wines. As for the more expensive wines—what he calls "Frog wines"—they were beyond his pocketbook. "Why," he wondered, "can't this country produce a good wine that doesn't cost a week's pay and doesn't give you heartburn?"

After retiring from baseball, Mr. Carr persuaded an uncle to lend him \$3000 to begin cultivating grapes in the Midwest. Starting on a six-by-six-foot plot near Ames, Iowa, he learned winemaking the hard way. "I took some grape seeds and planted them in the ground and waited. After a few weeks, nothing had happened. I figured I'd done it wrong, so I went out and bought a book."

Climate, soil, and the proper amount of rainfall were major problems. "I finally went over to the university," Mr. Carr said, "and got the top agriculture student in the class." Working with the student, Mr. Carr constructed a "winehouse"—similar in structure to a greenhouse—and together they produced, within three years, commercially viable grapes. The student, Don Jones, has since become a successful grower in his own right.

Buoyed by another loan from his uncle, Mr. Carr built more winehouses and began to test-market his new product. The first wine bottled with the Shato Lefty label became available in the Midwest in 1965. A year later, a friend of Mr. Carr's uncle, on the strength of good reports, moved his family from New York to Topeka and

*Charles Varon lives in California.*

began his own operation. The friend's name was Harry Bernstein.

Through perseverance and cooperation, the two fledgling wineries managed to survive. Mr. Bernstein joined Mr. Carr's new Great Plains Vintners Association; the two bought out a bottling factory, hired a publicist, and retained a consultant to advise them of advances in winehouse technology. Within half a decade, six other vintners, including Don Jones, had joined the association, and national distribution had begun.

Mr. Carr, who is now serving his third term as president of the association, has recently made another bit of winemaking history, or one of his wines has: the Shato Lefty Famous Red Wine has sold a million bottles. Of this robust offering Mr. Carr says, "That's my hamburger wine." Nonetheless, this is an exquisite, not-too-dry red with a delicious, earthy bouquet. At \$1.29 a half, it's a steal.

New this season, and deserving of special mention, is the Shato Lefty Famous Red Wine No. 2. The Number 2 is nuttier, though less fruity, than its older brother. This is a premium wine (\$1.89 a half) with a rare clarity and roundness, a rather quiet nose, and none of the pieces of grape seed that you find in the other wines of the Great Plains. □

## FASHION AMERICA THE COMFORTABLE

BY HOLLY BRUBACH



IN THE DAYS WHEN the designers' power seemed absolute, fashions changed at an alarmingly rapid rate, and often for no apparent reason. So capricious, so mysterious were the forces at work that specific styles, though they make sense in retrospect, seem to have come from nowhere. It was probably inevitable that fashion would in time acquire a little common sense, that the prevailing ideal of women's beauty would become one of more naturalness, but hardly coincidental that it happened during the 1970s, when all America was going back to nature—eating granola, backpacking, and decorating city apartments with wicker, bleached pine, Hai-

tian cotton, and plants. Artists, determined to get to the bottom of things, isolated the elements of composition and worked with each separately, distilling every form to the barest minimum. This was minimalism, and its nuts-and-bolts aesthetic, underlying Sol Lewitt's paintings and Philip Glass's music, isn't far from the impulse that three years ago led Perry Ellis, Calvin Klein, and Giorgio Armani to restrict their palettes to a narrow range of "neutral" colors—beige, gray, olive drab—shifting all the interest to the play of textures.

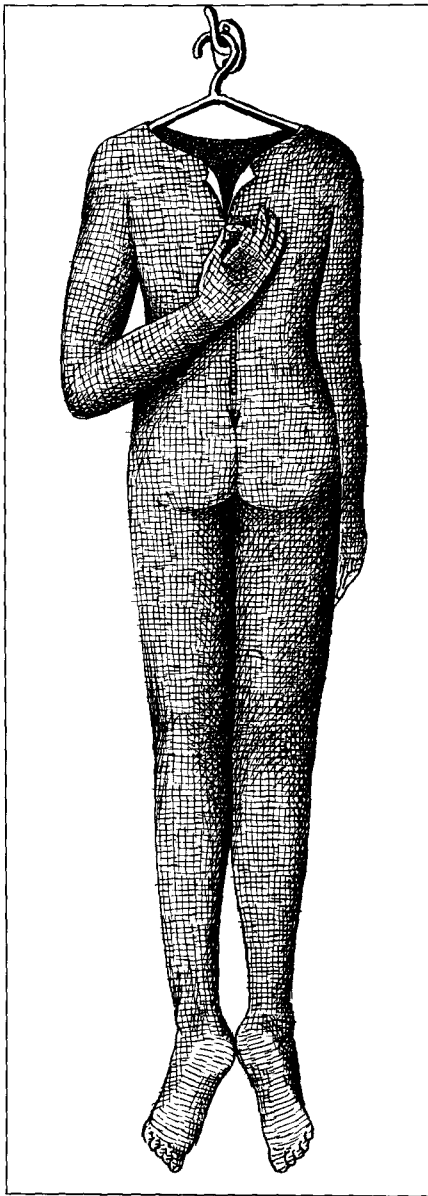
When fashion began in the seventies to appropriate plain clothes—the dutiful, sensibly planned sportswear that has historically been the American garment industry's mainstay—American style finally came of age. This is the way of dressing we know best, and, whether or not it looks especially attractive, it's comfortable, and we're comfortable with the idea of it. The idea is essentially a moral one—a matter of ethics, aesthetics aside. The religion may have been lost along the way, but the Puritan sensibility instilled to this day in many Americans from birth holds our material desires in check. Objects—a chair, a spoon, a shoe—are defined by the function they perform, and any detail that doesn't serve that function is frivolous, mere trimming. The beauty of a Shaker chair is in its integrity. Good prose must be pared down, stripped of decoration, if it's to follow the plainspoken example set by *The Elements of Style*. Elegance is, to the American way of thinking, a little austere.

A crew-neck sweater, silk evening pajamas, or a pair of gabardine slacks—particularly as designed by Calvin Klein, whose name is to many Europeans now synonymous with the American style—is simple and declarative, as French clothes rarely are. Yves Saint Laurent's, for example, insist on closer examination—the line of the lapel, the intricate construction, the shape of the sleeve, must be appreciated in detail. Between Calvin Klein, Ralph Lauren, Halston, John Anthony, and Zoran, on the one hand, and Saint Laurent, Emanuel Ungaro, Karl Lagerfeld, and Hubert de Givenchy, on the other, lie the ocean and the difference between

*Holly Brubach writes about fashion and dance for Vogue.*

American and French fashions, between ready-to-wear and couture—a difference that dates back to the nineteenth century, when Americans were ordering their wardrobes by mail from Sears, Roebuck and the French were commissioning theirs from local dress-makers. While our heritage is one of mass-market clothes, in shapes generalized enough to fit various body types, the French draw on a tradition of custom-tailoring; even in designing ready-to-wear, a concession French couturiers first made—reluctantly—some thirty years ago, the French think in highly individual terms. Paris fashion is born in the *atelier*, a hothouse in which the immediate sensuous appeal of beautiful clothes is cultivated. The French notion of what constitutes a personal style in dressing rests with a woman's discernment, her ability to select a beautifully designed jacket, shoe, or bag—and, of course, with those things themselves. (When I bought a blouse last winter in Paris, the salesgirl said: "*Vous avez bien choisi.*") American style, for its part, is 10 percent the clothes and accessories a woman has to work with and 90 percent ingenuity, sleight-of-hand. It's chic on the cheap—something made out of nothing, with bright-colored socks or a scarf or a belt—brash and a bit incongruous, but with a sense of humor. Judging by the clothes that fill most American women's closets, few of us can be said to reside in the realm of high fashion, but we venture into it, flying by the seat of our Army-surplus pants.

European resistance to the way of dressing now known as American style has had nothing to do with recognizing its Americanness and everything to do with recognizing its style: for a long time, the "American style" was the absence of any style whatsoever. Today, American designers make fashion that suits the way their constituency feels about clothes, for the lives women are now called upon to lead. Americans have always understood "active sportswear" and conceived it in highly original terms (Claire McCardell's designs from the 1940s, currently revived, confirm this), and it is that natural affinity for casual sports clothes that move well which they now bring to all kinds of dressing—for the office, for exercise, for evenings, for weekends. Sex appeal, when it enters the American fashion picture, is either ingenuous and cheer-



leaderlike, with overtones of high-school romance (as in Perry Ellis's skating suits last winter), or turned-on and aggressive, in some advanced stage of undress (like Calvin Klein's scant silk "bathrobe" wrap dresses). There is, apparently, no very practicable way for a woman to look sexy during the daytime—there is no reason she should want to. Sexy dressing is, to our minds, how to dress for sex.

If the absolute consistency of styles in any given year in the past now seems a bit baffling, it is not, as a good many people think, because fashion was once a conspiracy, with designers, editors, and department-store buyers all closeted in a back room at Maxim's deciding how women should dress. Instead, it was circumstances that conspired to make one silhouette or hemline or color

ubiquitous. The shape fashion takes always depends on the fabrics available at the time—crisp woollens suggest tailoring, for example, while soft woollens lend themselves to drapery—and twenty years ago, with fewer fabric resources to choose from, designers often found themselves on the same track. Then, too, the ready-to-wear industry was unashamedly out to copy the couture. Paris uttered the word, and Seventh Avenue passed it on. A good designer's influence was everywhere, but his share of the credit—and the profit—was comparatively small. When French couturiers finally set about making ready-to-wear, it was to knock off their own collections and cash in.

THAT FASHION IS now bigger business than ever, with licensee agreements proliferating faster than designers can sign their initials to so many sheets, Cadillacs, and billfolds; that European couturiers have now come around to adapting their designs to mass-production techniques, for the vast and ever-expanding import network in the States; that a hugely successful designer such as Perry Ellis comes equipped with a background in retailing and a first-hand understanding of what women want, of what sells—these are still more signs of new times, when fashion has had to learn how to hustle. This is the American way. Designers will probably never again agree on silhouettes and hemlines: too much depends on each maintaining his own distinct identity, now that the couture and ready-to-wear collections are flagships for a conglomerate that bears his name.

Fashion is still news, but the press today reports a different story—not the theme of the collections but their diversity, something for everyone. Even so, for all these various shapes and colors and lengths, women today don't dress so differently, one from the other, as might be supposed. There is still a prevailing mode, but it's an attitude, no longer a look. Fashion now comes down to comfort: when a woman feels comfortable, she looks her best. While a purely visual aesthetic is always somewhat arbitrary, this one is logical and morally defensible—like contemporary art. We live in an age of conceptual fashion.

But even now, freed from designers' edicts—what's "in" this year, what's

"out"—people persist in following trends (cowboy boots, at the moment), borrowing style from one another. It seems both ironic and predictable that a society of immigrants, the self-proclaimed melting pot of all nations, should seize on conformity as the means by which people are classified. By the clothes we wear, we declare that we belong, and what we belong to. So fashion, for all its frivolity, is a practical notion after all.

The course of fashion runs parallel to the histories of politics and art. That so much authority was vested in designers during the late forties and the fifties is not surprising; Americans then placed their faith in big business and big government; painters joined forces in the name of abstract expressionism and choreographers in the name of modern dance. Identity was defined collectively, in movements or causes, and individuality wasn't yet the cult it was to become later on. Fashion was once a fairly reliable index to the social and political order—who was on top, who was climbing, who rebelled. The signals sent by clothes change when we come to need different information at first glance. Today, fashion is less concerned with propriety, not coy but forthright about sexuality, and ostentatiously preoccupied with wealth. Louis Vuitton bags are everywhere, not because they're well-designed but because they're expensive. Designer labels now designate income brackets, which are slowly supplanting distinctions of social class: old money is giving way to more money.

Appearances are as much to be trusted now as ever, and what to wear is, in America, still a question of right or wrong. Twenty years ago, the fashionable woman cared about fashion. Today, she dresses as if she didn't give a damn. For the time being, clothes are chiefly required to tell the truth, in concise and straightforward terms. Fantasy, anything that might falsify or misrepresent a woman's true identity, is cast aside as we strive for some realistic outlook on our lives and on the people around us. As an American, I subscribe wholeheartedly to this policy of honesty in clothes—in spirit. The flesh, however, is weak.

One afternoon, I wandered into Saks, where Saint Laurent evening clothes had been marked down, picked a velvet ballgown off the rack, and marched

straight for the fitting rooms as if I'd been intending to do so all along. To say that the dress fit well is too literal a verdict; I saw myself as I never knew I could look. Like a heroine, I thought, and I bought the dress. That was five years ago, and it was two years before I could come up with an occasion to wear it.

In admiring and wearing Saint Laurent clothes since, I've come to the conclusion that his genius lies in this ability to reveal to a woman some undisclosed side of her personality. In the hands of the best designers, fashion sets a woman's sense of herself free. Like little girls who try on different identities by playing dress-up, or actresses who put on their characters with their costumes, women rely on their clothes to help persuade themselves—and, probably, others—that they are whoever it is they need to be. At the moment, women urgently need to believe that they are competent, intelligent, responsible, ambitious, sensible, and strong, and American fashion provides the clothes to convince us of it.

My mother asked me how much I paid for my ballgown. I divided the price by four and added fifteen dollars. "Oh, my," she said. Well, even that amount was an awful lot of money for a dress. But it wasn't the dress I bought. I bought proof that people are larger than the everyday dimensions of their lives. □

## MUSIC VARIATIONS ON THE SONATA

BY WILLIAM H. YOUNGREN



TEN YEARS AGO, Charles Rosen was known to the public almost solely as a concert pianist of mixed reputation. He had been making records for several years, he wrote his own liner notes (as well as an occasional piece on music for the *New York Review of Books*), he was obviously literate and articulate; but he

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was seldom heard in concert outside of New York, and his records left unfulfilled what one had been told was his immense promise. Then, in 1971, Viking Press published *The Classical Style: Haydn, Mozart, Beethoven*, and Rosen suddenly found himself launched on a new career. In the spring of 1972 *The Classical Style* won a National Book Award, and soon afterward it was reprinted, in an enlarged paperback edition, by Norton. This year Rosen, now firmly established as a scholar and teacher, gave the Charles Eliot Norton lectures at Harvard.

The best that could possibly be said about his new book, *Sonata Forms* (Norton, \$16.95), is in fact also the truth: it is a fitting successor to *The Classical Style*, and its appearance is an event of major importance to serious music-lovers. Rosen once again succeeds brilliantly in generalizing about the period that contains our greatest music yet, paradoxically, has been the period most mistreated by historians.

The main problem in writing historically about any of the arts, or about any period in the life of any of them, is of course how to generalize illuminatingly without distorting the material at hand, how to keep one's critical sense of the value and significance of particular works from being dulled by the need to discover trends and tendencies. While parallel problems occur in any branch of historical writing, the difficulty seems more acute in the case of the arts. We have been told so often that works of art are unique and autonomous, and that their whole value lies in their uniqueness and autonomy, that we are especially prone to imagine that the generalizing historian necessarily poses a threat to their very life. Indeed, some philosophers of history have denied outright that it is possible to write historically about the arts. But that notion is surely a dead end. The urge to fit works of art into some larger context, to judge them in relation to other works, is as natural and irresistible as the urge to write historically about wars or constitutional changes. In fact, we cannot talk for long about a work of art (and remain interesting) without beginning to talk about it historically.

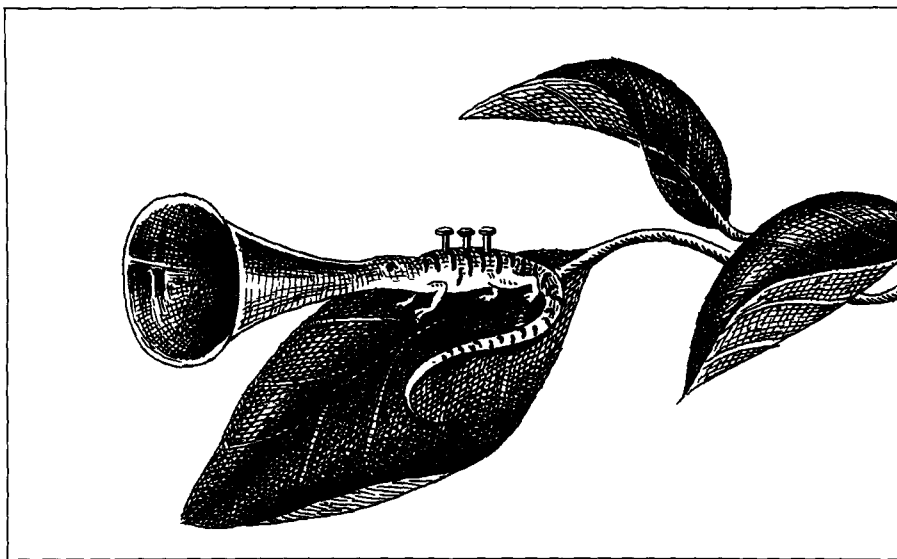
A MORE LIMITED BUT related problem for anyone who sets himself, as Rosen has done in both his books, to study the Viennese classical composers



is that most of the historical writing about them has been so inaccurate and misleading as to discourage one about the very possibility of the enterprise. Music history began seriously to be written only in the second half of the nineteenth century: it has been estimated that as many histories of music appeared in Germany between 1850 and

In 1929, Robert Haven Schauffler could title a once famous book "*Beethoven, The Man Who Freed Music*" (freed it, of course, from Haydn and Mozart) and could insist that "the most revolutionary thing about the *Eroica* was the liberation it gave sonata-form in the first movement," namely through Beethoven's introduction, into

"So much for Beethoven's concern for musical etiquette in an age of periwigs and powder." And Kerman labored hard (though in vain) to discover in Beethoven thrilling anticipations of Webern, hoping thereby to ensure Beethoven's status as a certified revolutionary. More important, Kerman, like many less well-educated writers before him, fixed on the C-sharp minor Quartet, Op. 131, as the work most fully embodying the revolution supposedly wrought by Beethoven. For in the last movement of that work Beethoven pointedly alludes to a theme heard in the first movement, thus breaking down the barriers between movements so essential to sonata form and apparently opening the way for the "cyclical form" favored by the Romantics.



THE SHINING EXCEPTION among historians of the classical period was the brilliant English musician and scholar D. F. Tovey, whom Rosen has wisely taken as mentor and guide. For thirty years, until his death in 1940, Tovey demonstrated, in essay after essay and with unmatched wit and learning, that the standard, melodramatic, mythically politicized view of Beethoven and of his relation to his great predecessors is sheer nonsense. He once spoke of Beethoven as "the most conservative of revolutionists; a revolutionist without the R," and in another place he asserted that "enormously as the power of [Beethoven's] art increased with its range, his development maintains a perfect continuity with the art of Mozart and Haydn." Tovey showed that it was common practice, long before the *Eroica*, to introduce a new theme into the development section, and he responded thus to fancy attempts to relate Beethoven's alleged revolution to the genuine one that had recently gone on in France: "It is an unfortunate coincidence that during Beethoven's lifetime the French Revolution was going through what a philosophical historian has ironically described as the formula of actually taking place. In his treatment of art-forms, early and late, Beethoven was no more revolutionary than Mozart, and far more regular than Haydn. Neither of those masters had established any formal orthodoxy. They each had widely different habits of their own." Thus, not only was Beethoven not the revolutionary bull but the eighteenth-century china shop had never existed in the

1900 as had appeared previously in all countries put together. Because that was the age of Comte, Bury, and Herbert Spencer, progress and evolution were very much in the air; and because the age was also the afterglow of the Romantic movement, historians found it natural to see the great achievements of that movement as the goal toward which the entire musical past had been evolving all along. Thus, music history became a species of what historians call "Whig history": the development of Western music was read as a story of more or less steady progress toward the enlightened present. From the dark ages of primitive music and plainsong we move through the intriguing fumbings of early composers (with Palestrina usually treated as something of a sport) to the groundbreaking works of Bach and Handel, the more logical but rigidly constricting forms of Haydn and Mozart, and (at last!) the liberating overthrow of those forms by the Romantics—as symbolized chiefly by the titanic figure of Beethoven—with his famous scowl and his generous democratic sympathies. (Beethoven destroyed the original title page of the *Eroica* upon hearing that Napoleon, to whom the work had been dedicated, had proclaimed himself emperor.)

the development section, of a theme not previously heard in the exposition. "The 'working-out' portion of a sonata had heretofore been as jealously taboo to new ideas as the mind of a fundamentalist to new theological doctrine. VERBOTEN was posted on the sacred enclosure. Then Beethoven came striding roughshod over the forbidden threshold, leading in this radiant novelty." It is easy to dismiss Schauffler as a popular hack and a vulgarian, but most of the writing on the classical period by trained musicologists has been little better.

In 1938, Hugo Leichtentritt, in *Music, History, and Ideas*, explained away Mozart's tragic early death by pronouncing him "a child of the dying rococo age" who simply could not withstand "the rude shocks of the French Revolution" as well as could the "robust and masculine" Haydn or as could Beethoven, whose aesthetics were, for Leichtentritt, summed up "in the three words *liberté, égalité, fraternité*." Even as recently as 1967, Joseph Kerman, in his long and pretentious book *The Beethoven Quartets*, kept alive the old stock image of Beethoven as the revolutionary bull in the eighteenth-century china shop. Of a perfectly routine moment in an early quartet, Kerman remarked:

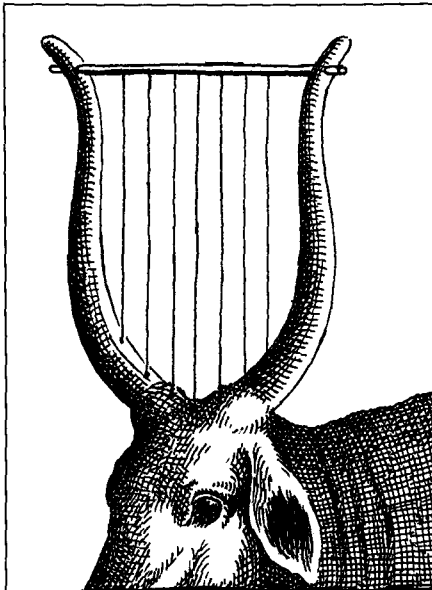
first place. Of Op. 131 Tovey wrote: "The idea that Beethoven, in such works as this, 'broke the mould' of the classical forms is fatally well-expressed in that metaphor. There was no mould to break. The art forms of Haydn, Mozart, and Beethoven were not moulds in which music could be cast, but inner principles by which the music grew. . . . Mozart is no more comfortable in a mould than Richard Strauss."

In *The Classical Style*, Rosen fleshed out and at some points corrected Tovey's view of the passage from Baroque to classical to Romantic music. In *Sonata Forms*, he has gone still further, narrowing his focus to the structural core of the classical style and analyzing it more thoroughly and intensively than he could in his earlier book. As I have said, *Sonata Forms* seems to me fully as good and useful as *The Classical Style*, but it so clearly takes *The Classical Style* as its point of departure that no one who has not worked through the earlier book and lived for a while with its ideas will be likely to get much from the later one. But anyone who has done these things will get a great deal.

ASIDE FROM THE fact that its title is plural rather than singular, the first thing one notices about *Sonata Forms* is that its initial emphasis is quite different from that of *The Classical Style*. Rosen began *The Classical Style* by bringing up to date and enlarging upon Tovey's attack on the old textbook theories of sonata form. Whereas these theories had defined sonata form as a rigidly prescribed arrangement of themes, Rosen, like Tovey before him, chose to concentrate his attention on other musical elements, such as rhythm, harmony, and phrasing. Themes were treated as of secondary importance, an anachronistic preoccupation of the Romantics who codified sonata form after its great practitioners (and, in a sense, the form itself) were dead. But the preface to *Sonata Forms* begins: "The book that follows is an attempt to see what can be salvaged of the traditional view of sonata form," and in his introductory chapter Rosen subjects the old textbook definition to more searching and sympathetic examination than it received either from Tovey or from *The Classical Style*. Tovey taught us that the definition actually fits very little of the music of Haydn,

Mozart, and Beethoven, but Rosen now wants to point out that the purpose of the definition "was not the understanding of the music of the past" but rather the establishment of "a model for the production of new works." He states: "The definition does not work well for the eighteenth century because it was never intended to."

But this is surely to see too clear a split, in the minds of the early theorists, between the practice of the past and the proper model for future work. The whole progressivist (or "Whig") view, which was coming into fashion just as the definition was being formulated, assumes precisely that these are



not clearly separated: what makes the best works of the past best is that they contain the germ of the best future works, and this is why we value them. The early theorists were trying both to characterize the most important (because potentially most useful) music of the past and to predict and shape the course of music to come. Rosen's salvage attempt seems pointless and unconvincing, a bit of unnecessary piety. In practice, it boils down to the rather lame injunction that since "the themes and their order clearly had an important role to play," we should investigate their function as well as the functions of the other musical elements.

There is, however, a more interesting side to Rosen's introductory chapter. The early theorists, he points out, were all deeply influenced by Beethoven, and hence they based their model for future composition on his most easily and safely imitable early and middle works.

We have now rejected this justly discredited "method of defining a form by taking the works of a famous composer as models," Rosen tells us, and have adopted in its place "the attempt to define the general practice, what most composers did most of the time within a given generation or decade and within a limited space, a country, region, or even city." "Ah, yes," we silently respond, nodding appreciatively. "How much sounder, more modern, more empirical—progress!" But then Rosen catches us off guard:

I may as well lay my cards on the table at once and say that I find the new method as unsatisfactory as the old. The general practice of a period is naturally interesting, but unmediated and uninterpreted it can define nothing. The belief that by itself it has some historical significance is based . . . on a false psychology of the composition and reception of music.

He then argues, on the basis of a 1788 review of Haydn's *Paris Symphonies*, that educated contemporary listeners "listened to Haydn not against a background of general practice but in the context of Haydn's own style." And Rosen adds a convincing modern parallel: "The stylistic unity of the late eighteenth century is often overstated . . . there were many composers in the 1780s whose style was farther from Haydn's than that of Benjamin Britten from Igor Stravinsky's, and no experienced amateur of music ever went to hear a new piece by Britten expecting it to sound like Stravinsky." Rosen's conclusion is thus that "Statistically defined, 'general practice' is pure fiction."

ALL THIS SEEMS admirable, but where does it leave us as historians who know that something very important happened between early Haydn and late Beethoven, and who want to specify what that something was? Doesn't Rosen's dismissal of "general practice" as a (presumably useless) fiction force us back to the critical description and analysis of particular works? He has, after all, insisted from the outset that "it is very dubious that a unique sonata form can be . . . defined even for a single decade of the late eighteenth century . . . there is no biological continuity among sonata forms, and there are many sonatas more closely related to

concertos, arias, and even fugues than to other sonatas."

This brings us at last to Rosen's carefully chosen title. "The title of this book is plural," he writes. "That is meant to emphasize that what was eventually to become the canonic type of sonata form developed along with other forms, which influenced each other and were, in fact, interdependent." This emphasis on pluralism—on the wide range of formal choices open to any composer at a given time and on the fruitful interaction among various musical genres—shapes the rest of *Sonata Forms* and enables Rosen to reach full and positive generalizations about the origins, growth, and dissolution of sonata style while still fulfilling the critic's function as mediator and interpreter, still holding fast to the critic's sense of the extraordinary variety exhibited by particular works.

After a brief but very interesting chapter on the changing social conditions that accompanied the rise of sonata style, we reach the heart of the book: nine closely interrelated chapters on such technical matters as the binary and ternary forms out of which sonata forms grew, the influence of aria and concerto forms, and the types, evolution, and individual sections of sonata forms. Through all this elaborate and sometimes difficult demonstration, the insistence on pluralism is paramount. "It is important," writes Rosen, "to emphasize the variety of sonata patterns available to composers in the 1750s—indeed they remained available until the nineteenth century, when the choice becomes more restricted, and the original freedom reappears only in the late work of Beethoven." But later he notes:

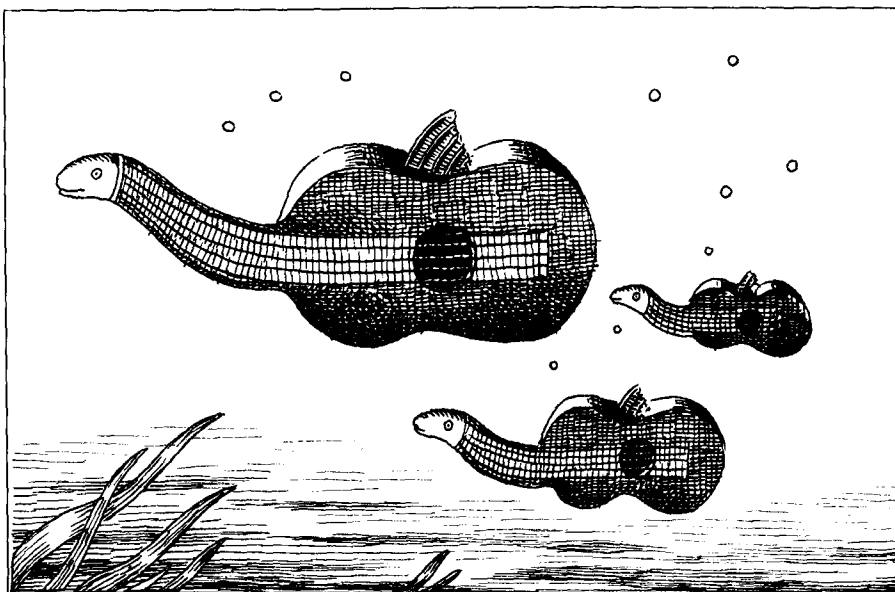
This freedom of choice did not prevent the formation of stereotypes, but the significance of these stereotypes in any given decade from 1750 to 1800 will only be misunderstood by classifying them as deviant forms [i.e., from some supposed "norm," as specified either by the early theorists or by the modern adherents of "general practice"] or by a failure to recognize them as related sonata forms. The history of sonata style cannot be written as a gradual progress toward the nineteenth-century model. Older stereotypes remain viable for long periods. C. P. E. Bach continued to publish until the

late 1780s, sometimes using forms of the 1740s—these, indeed, continue to be employed as late as the time of Chopin.

The term "stereotype" is useful to Rosen because it offers an alternative to "model," which was so important to the early theorists and to his treatment of them. "It is wrong," he writes, "to think of fixed models of sonata form for the eighteenth-century composer: useful stereotypes that could be employed or abandoned at will are what he probably worked with."

Thus Rosen's emphasis on pluralism does not prevent him from seeing a central process of development, though it

theme of the *Goldberg Variations* are almost identical structurally, but the identity is concealed from the ear by elaborate ornamentation and a striking change in texture. "This kind of hidden symmetry," writes Rosen, "is rare in sonata forms. Sonata style largely dispenses with the simple ABA forms in favor of the reinterpreted symmetries, parallelisms with a difference, inherited from the Baroque, but it makes them always evident." During the first solo of the first movement of the *Italian Concerto*, Bach sets up just the sort of tonic-dominant opposition that was to become so important to the classical composers, but then (in Rosen's words)



is a very different one from that seen by the progressivist historians and is far more difficult to summarize. As in *The Classical Style*, but somewhat more technically and with an even sharper eye for detail, he brings out the variety of ways in which the classical composers exploited the new and more efficient tonal system, with its enhanced ability to polarize tonic and dominant in order to juxtapose areas of tonal stability and instability, to articulate sharply such qualities as balance and symmetry, and so to create music with more immediate and powerful dramatic impact than any before or since.

I CANNOT HERE EVEN begin to suggest the astonishing range of Rosen's examples or the deftness with which he uses them to make his general points. So I will confine myself to two, both from Bach. The concluding eight-bar sections of the two parts of the binary

"throws it all away by moving to IV (B $\flat$  major) at the end of the second phrase of the ritornello: he is not interested in the polarization of I and V which he has in fact established." The real triumph of sonata style thus lies not in the creation of new forms but rather in articulating more clearly and obviously the structures already present in Baroque forms.

But all this stress on structure and clarity of articulation somewhat undermines Rosen's initial attempt to rehabilitate themes as an element equal in importance to rhythm, harmony, and phrasing. Even near the beginning of *Sonata Forms*, he admits that in sonata style "it is the structure . . . that confers meaning on the themes," and later he elaborates:

This insistence on an immediate and unmistakable definition of the tonality by the theme is typical of



the style of the last quarter of the eighteenth century; that is why the themes of the lesser composers of this period (and often of the greatest) are, in themselves, less expressive and less characteristic than those of earlier decades. . . . The opening themes of the classical period are often more neutral, more obviously and explicitly dependent on the tonic triad than those of the Baroque.

To see the truth of this, one need only recall the opening theme of the *Eroica*.

Moreover, it is Rosen's sporadically recurrent determination to insist on the importance of themes that accounts for the one unconvincing chapter of this central section of *Sonata Forms*—"Motif and Function." In *The Classical Style*, he demonstrated Haydn's ability to invest a seemingly insignificant accompanying figure or rhythmic motif with sudden prominence and power; but now Rosen wants to call these little bits of music that suddenly and unexpectedly become the sole objects of our attention "themes" or "melodies"—which seems an odd and misleading extension of the terms. For surely the point is that they are not truly thematic; that is why we are so surprised to find them suddenly center-stage. This extension of terminology also leads Rosen to blur important differences among his examples, for in a few of them he is pointing to actual themes, which he now has no way of distinguishing from the mere fragmentary motifs he is pointing to in the others.

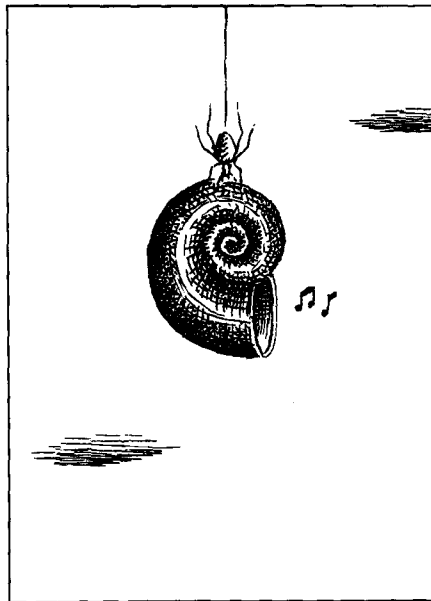
ROSEN'S TWO EXCELLENT concluding chapters deal with the relation of Beethoven and Schubert to each other and to sonata style, and with the handling of the style by such later composers as Schumann, Chopin, Brahms, Bruckner, Berg, and Bartók. In both chapters, Rosen illustrates further one of the big points of his earlier book: the similarities between Baroque and Romantic music. With the exception of late Schubert—and, of course, of Beethoven—the music of the early nineteenth century returns to the Baroque fascination with ornament and, more important, to the Baroque sense of harmony:

The Romantic generation turned back to an early eighteenth-century, or Baroque, sense of key relations. For Bach, a tonality was

more closely linked with its relative minor than with the tonic minor. D major and B minor were more or less the same key for him, while B minor and B major were very different. . . .

Sonata style insisted on a sharp focus on the tonic. The Romantics saw the tremendous advantages offered by a fuzzier system.

The result is a loss of the drama and concentration peculiar to the classical style as articulated in the sonata forms of the late eighteenth century.



Thus Beethoven, far from being the revolutionary herald of the Romantic future, becomes something of a hold-over; and the highly idiosyncratic greatness of his later works, which led earlier historians to tag him as a revolutionary, is seen as a further working through of the implications of the forms he inherited from his great predecessors. Rather than talking about Beethoven's revolution, Rosen prefers to talk about his "escape from the classicizing process" prevalent in the early nineteenth century, a process through which the great classical works were stripped down to imitable models and the new (and yet old) profusion of ornament and fuzziness of harmony created "a relaxed serenity not attainable in the more tightly organized sonata style of the eighteenth century." For Rosen, as for Tovey, "The structure and style of Beethoven's music are best understood as an extension of Haydn and Mozart. In fact, it is the works of Beethoven's final period that are fundamentally most akin to classical Vien-

nese style, in spite of their obvious personal idiosyncracies—perhaps, indeed, because of them."

IN HIS FINAL chapter, Rosen traces the aftermath of that classicizing process, the erection of the sonata as "the vehicle of the sublime," the musical parallel of "the epic in poetry, and the large historical fresco in painting." He says, "The proof of craftsmanship was the fugue, but the proof of greatness was the sonata." Most of the chapter is given over to a brilliant analysis of Schumann's F-sharp minor Piano Sonata, in which Rosen demonstrates in detail the breakdown of classical sonata form supposedly anticipated by Beethoven in Op. 131. (As Rosen points out in passing, the explicit cyclical form that we find in Schumann and the other Romantics is very rare in Beethoven's work and of negligible importance to his influence on later composers.) There are also several very provocative brief descriptions of the later composers' handling of sonata form: of Brahms's "noble, expansive, relaxed, and academic beauty"; of the increasingly pervasive Wagnerian chromaticism seen first in Bruckner and carried so far by Reger and Scriabin that "all sense of harmonic opposition completely disappears"; of Bartók's Fifth Quartet, in which we encounter "not so much a new version of sonata form as a brilliant twentieth-century metaphor for sonata form."

Both these chapters are, like the concluding sections of *The Classical Style*, a bit rushed and perfunctory. The disadvantage of Rosen's extraordinarily rich and detailed knowledge seems to be that he has a hard time ending a book and must simply shut himself off. But this is a minor criticism. My major criticism of *Sonata Forms* is that many of the musical examples are inconveniently printed in full score and go on for too long at a stretch without interspersed commentary and analysis. In *The Classical Style*, almost all of the examples from orchestral and chamber music were reduced to two or three staves, so as to be more or less playable on the piano, and even in the long analysis of Beethoven's *Hammerklavier* Sonata, the climax of that book as the Schumann analysis is the climax of *Sonata Forms*, Rosen stepped in now and then to point out details and explain their significance. But in *Sonata Forms* he doesn't shrink from quoting

more than 100 bars each from a Mozart symphony, a Mozart opera, and a Haydn mass—all in full score; or (most depressing of all) a whopping 395 bars from the Schumann piano sonata. Because the analyses come at the end, the reader must constantly flip back and forth from analysis to musical text in order to make sense of what Rosen is saying.

The effort is, in every case, well worth it, but Rosen's editor should have protested strongly the addition of unnecessary difficulties to an already (and necessarily) difficult book.

A FRIEND WITH WHOM I was recently discussing *Sonata Forms* asked me whether or not Rosen had really "gone beyond" Tovey. In a sense, the answer is no. Almost all the essentials of Rosen's view are there somewhere in Tovey, scattered through his many volumes of essays. Aside from Rosen's point about the similarities between Baroque and Romantic music, which I do not recall encountering in Tovey, the exceptions are minor: Rosen pays more attention to eighteenth-century opera than Tovey (though in doing so he is following up a hint of Tovey's); yet Gluck's influence is less important for Rosen than for Tovey; Rosen thinks C. P. E. Bach's influence more important than Tovey did; and so on. Yet Rosen, in both his books, has so enriched Tovey's view, and has succeeded so well in pulling it together and giving it the satisfyingly cohesive long-range exposition that Tovey never achieved, that one wants to say he has in fact gone beyond Tovey. After a certain point, a difference of degree becomes a difference in kind.

That *Sonata Forms* is a fascinating supplement to *The Classical Style* rather than a wholly independent book is nothing against it. Nor is its difficulty. Its subject is extremely complex, and one could no more write a simple yet trustworthy book on it than one could write such a book on quantum theory. The abortive efforts of the progressivist historians, right up through Kerman, prove the inevitable futility of any attempt at simplification. We should hope that there will be more such supplements to *The Classical Style*, and be grateful that so learned, perceptive, and eloquent a writer as Rosen is around to battle the old myths that still inhibit and confuse our best efforts to understand our greatest music. □

## BOOKS

## PUBLIC PHILOSOPHER

BY JACK BEATTY

A LIFE IN OUR TIMES: MEMOIRS

by John Kenneth Galbraith. Houghton Mifflin, \$16.95.



WHEN I TRY to picture John Kenneth Galbraith, I see him skiing down a Swiss slope, training a sardonic eye on the orgy of conspicuous consumption in the valley below. That valley is one of the posh places of the affluent society. Progress and plenty seem to reign there, but Galbraith has taught us that this appearance masks economic irrationality and social squalor.

Galbraith has made a fortune from delivering such bad news. That his books have sold in the millions should nevertheless discourage invidious generalization about the best-seller list, for they are of the highest literary quality. He has written twenty-one, including two novels; a learned treatise on Indian painting; a disquisition on the market system of the Puerto Rican waterfront; a trilogy on political economy, which comprises *The Affluent Society* (1958), *The New Industrial State* (1967), and *Economics and the Public Purpose* (1973); and now these memoirs.

Galbraith's signature as a stylist is

his famous irony, and if we sometimes feel, with Robert Heilbroner, that "Galbraith's mocking irony causes him in the end to avoid a clear moral commitment with regard to the problems he raises," more often we respond to its energy, its sinewed feeling. That energy may end in delight, but it begins in anger. And it is nothing if not committed. Behind the ironic manner, this book makes clear, is a tough customer, a man equally formidable in intellectual and practical endeavor. Behind it, too, is a radical critic of our political economy.

John Kenneth Galbraith was born in 1908 in Dunwich Township, Ontario, near the western end of Lake Erie. About the significant people and experiences of his Ontario childhood his memoirs add little to what he related in *The Scotch* (1964), a charming group portrait of the proud, unyielding, resourceful tribe to which the Galbraiths belonged. The Scotch, as they are called in Canada (but not in Scotland: Galbraith had to title the British edition *The Non-Potable Scotch*, to dispel ambiguity), settled in Ontario after being forced off their Highland farms by the enclosure movement of the eighteenth century, "when their lairds discovered that sheep were both more profitable and, as they moved over the hillside, more rewarding to the eye."

Galbraith's father was the head of a cooperative insurance firm and the master of two extensive farms (whose fields young Galbraith often plowed). By the standards of the countryside, the senior Mr. Galbraith was a considerable figure: "for around half a century . . . the leading liberal of the community," he was the cynosure of political discussion and instruction. But by the standards of the town, he was a hick; and this polarity of intellectual superiority and social inferiority was to fuse in the character of his son: "My



Jack Beatty is the literary editor of the New Republic.

legacy was the inherent insecurity of the farm-reared in combination with an aggressive feeling that I owed it to all I encountered to make them better informed." From the hard school of the farm there was a further legacy: "a deeply valid appreciation of the nature of manual labor." The first legacy made Galbraith superior, but the second makes him morally attractive.

Until his retirement, in 1975, Galbraith was a Harvard professor, but he is not a Harvard man. His alma mater is Ontario Agricultural College. There he studied

. . . animal husbandry, field husbandry . . . butter- and cheese-making, butchering and meat-cutting, apiculture, botany . . . farm management, agricultural engineering, soil management, horticulture, forestry, surveying, veterinary medicine, as well as a range of, to me, more practical courses, of which the most durably useful were English composition and plumbing, the latter known to my more casually spoken classmates as "pumps and shithouses."

After graduate education at Berkeley and Cambridge (he holds a Ph.D. in agricultural economics), he held a series of posts in the Roosevelt Administration, serving briefly as one of FDR's speechwriters in the 1940 campaign (Galbraith was a Democrat before he was a citizen). In 1941, on the strength of a paper outlining the Keynesian approach to price control, he took a giant step in his career by becoming the director of the Office of Price Administration, "the most powerful civilian post in the management of the wartime economy."

The ironic detachment of Galbraith the writer gives no clue to the energetic involvements of Galbraith the man of affairs. To list the subsequent stages of his career—director of the United States Strategic Bombing Survey, speechwriter for Adlai Stevenson, John F. Kennedy's ambassador to India, founding member of the ADA, organizer (among others) in 1967 of the "Dump Johnson" movement—would be to give away the itinerary of this delightfully teeming book. Perhaps it is enough to say that when, in the midst of an account of Democratic politics in the fifties, we come across the sentence "In those years I was also concerned with Puerto Rico," we are hardly sur-

prised: such an indefatigability gets around to everything, sooner or later. A few paragraphs on, he is boring into the problems of Canadian railroads.

"**T**RUTH," SAYS GALBRAITH in a characteristic formulation, "is not always coordinate with modesty." However, it is remarkable how often in *A Life in Our Times* truth is coordinate with self-praise. Thus, by his own account, Galbraith did a great job at the OPA; Stevenson loved his speeches ("Ken, I want you to write the speeches against Nixon. You have no tendency to be fair"); Kennedy savored his letters from India; Nehru took him to his heart; and he made a decisive contribution to ending the Sino-Indian war of 1962. To be sure, the Harvard Board of Overseers tried to deny him an appointment, and it took a threat of resignation from President James B. Conant to change their minds. But the book brushes past such reversals to stress triumphs.

Galbraith is particularly voluble about his prescience. Thus, regarding the rights of women at "Harvard Before Democracy," he is pleased to point out that he stood—alone, one would gather from his text—in the vanguard of reform. On inflation, on Vietnam, on the dubious prospects of the community-action wing of the Office of Economic Opportunity, Galbraith, he assures us, was wiser than the men around him. Probably he was. But he says so just a little too often. When his ironic persona drops its guard and vanity is bare of wit, the FBI's verdict on Galbraith seems just right: "Investigation favorable except conceited, egotistical, and snobbish." With relief we encounter the rare expression of regret, unwisdom, and self-doubt.

**E**XCEPT FOR AN admirably terse mention of a son's death from leukemia, Galbraith has nothing to say about his personal life: "My life has been without the agony that sustains interest . . . and which encourages the associated introspection." *A Life in Our Times* is a public autobiography; there is no agony in it. It is one of the funniest books in recent years.

A survey of Galbraith's comic rhetoric should start with his use of overstatement: "As a military ally," he writes to President Kennedy from India, "the entire Laos nation is clearly

inferior to a battalion of conscientious objectors from World War I." It should touch on his penchant for deadly understatement: "Andrew Mellon's difficulties with the income tax had not yet brought the National Gallery as a requital." It should admire his command of the periodic sentence and the comedy of billowing rhythm: "That the individual worker, needing regularly to eat, often committed to a mortgage, and in doubt as to alternatives, can deal on equal terms with the large corporate buyer of labor can be believed only after much careful training." It should applaud his pacing: "The experience of being disastrously wrong is salutary; no economist should be denied it, and not many are." It should note his vivid epithets: "A certifiably cretinous interviewer" vies with an author of "terminal superficiality" as my favorite. Finally, it should single out his diction. This might be described as "Samuel Johnson meets the Marx Brothers," since it features rare words in demotic contexts.

All of this merely constitutes the texture of Galbraith's prose. The book is also replete with straightforwardly hilarious anecdotes about personages such as Bernard Baruch and Lyndon Johnson and every scene is staged with vaudeville timing. Galbraith's comic voice is a distinctive and durable literary achievement. It can even get laughs from the dismal science.

**A** PROFESSIONAL APPRAISAL OF Galbraith's work as an economist must await a professional. Still, if we see him primarily as a public philosopher, then we can appraise his central vision without having to answer questions of empirical validation and logical method better left to the experts.

Galbraith is not nearly so well regarded by economists as he is by the general public. One economics textbook gives a quotation from his work and then comments, "Explain why every sentence of that quotation—except the third and fourth—is wrong, nonsensical, or irrelevant." For his part, Galbraith invites such attacks by strongly implying that many of his fellow economists are hirelings of the large corporations.

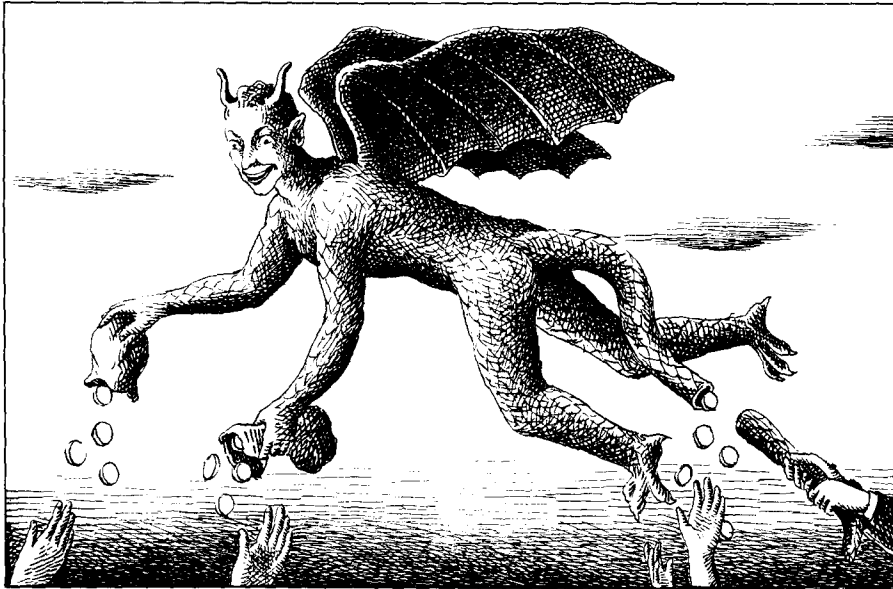
At the center of Galbraith's work is a concern not so much with the economy as with our mental image of the economy. In his view, this is likely to be false;



and certainly it is false if we have been trained in neoclassical economics, "the traditional irrelevancy." Galbraith is in the great tradition of critical philosophy. What he wants is to rid our minds of the false ideas we use to interpret reality and to replace them with valid ones. Reversing Kant, he must eliminate faith to make room for knowledge. The faith he must eliminate is the faith in the free market; that it does not operate over a large sector of the economy is the knowledge we must accommodate.

ly? They too are determined by the market. Are products deficient in safety, durability, design, usefulness? They only reflect the will of the sovereign consumer. . . . Is there adverse effect on the environment? If so, it reflects . . . the higher preference of people for the goods being produced as opposed to the protection of air, water or landscape.

The "valid image" of the economy is much less agreeable, for where the conventional wisdom posits freedom it re-



Our understanding of economic society is ruled, famously, by "the conventional wisdom," which holds that the economy is made up of "numerous entrepreneurial firms . . . all subordinate to their market and thus . . . to the instruction of the consumer." Competition among firms guarantees that goods will not be overpriced. Firms have no important power over their markets—that is, over the demand for their products. They are also "without organic power in the state"—that is, over the management of aggregate demand. The odd monopoly exists but is regarded as an irregularity. To Galbraith, this image of the economy has seemed false ever since he was the price czar during World War II and discovered that "it was relatively easy to fix prices that had already been fixed." However, he appreciates the political uses of the conventional wisdom: as he wrote in *Annals of an Abiding Liberal*,

Are its prices too high? The corporation is blameless. Prices are set by the market. Are profits unseem-

ly? They too are determined by the market. Are products deficient in safety, durability, design, usefulness? They only reflect the will of the sovereign consumer. . . . Is there adverse effect on the environment? If so, it reflects . . . the higher preference of people for the goods being produced as opposed to the protection of air, water or landscape. The "valid image" of the economy is much less agreeable, for where the conventional wisdom posits freedom it re-

veals power. The valid image is of a "bi-modal" economy. Galbraith argued in the same book that fully 50 percent of our private economic product is produced by the half of this economy (made up of between 10 and 12 million small businesses) that conforms to the free-market image. With the other half, the case is different. Dominated by 1000 to 2000 giant firms, it is ruled not by the market but by "a power or planning system." Through advertising and such grosser practices as price-fixing, the large corporation exerts power over its markets. The men in charge, Galbraith contended in *The New Industrial State*, are more concerned with long-term growth than with short-term profit. To secure growth they must avoid the entrepreneur's risk that the consumer will buy someone else's product. They therefore seek to channel the consumer's choices and to manipulate his whims.

Since power and economics are thus intimately joined in the planning system, they must likewise be joined in our

image of the economy. The conventional wisdom must give way to the news that "when the modern corporation acquires power over markets, power in the community, power over the state and power over belief, it is a political instrument, different in form and degree but not in kind from the state itself." Society must contend with this political instrument politically, by asserting public purposes over those of the firm. Such purposes include an interest in survival (Galbraith sees the large firm as deeply connected to defense procurement); an interest in a healthy environment; and an interest in quality products. Where is this galvanized public to come from? Galbraith's answer—from the universities and especially from the intellectual/scientific elite—is a desperate gesture, which does not do justice to his analysis. That stands as an impressive and radical achievement.

**Q**UESTIONS PRESS. FIRST, since Galbraith fails to outline a convincing politics to achieve the public purpose, is he simply a dreamy idealist? The fact is that he is a materialist who believes that social reality will one day prevail over the ideas we use to interpret it, and that this will have a political result.

Second, is Galbraith a socialist? Not in any programmatic sense. He is for what works. On the showing of our more productive friends, such as Sweden, Germany, and Japan, what works best is a mixed economy—public planning in the corporate sector, and a market economy in the entrepreneurial sector.

Third, does his economics help with our immediate problems, controlling inflation and increasing productivity? While his image of the economy as divided into a planning sector and an entrepreneurial sector elucidates the coexistence of inflation and recession (wage-price controls are the indicated remedy), Galbraith slights the problem of productivity. ("No one would be called upon to write at such length on a problem so easily solved as that of increasing production," he wrote twenty-three years ago in *The Affluent Society*. One suspects it is a sentence he regrets.) In his defense, the theme of *The Affluent Society* is that exclusive preoccupation with the *quantity* of goods produced blinds us to the *quality* and *kind* of goods produced. A society in

which everyone owns a television set but in which public transportation is unsafe, unsanitary, and inefficient may be productive on paper. Eventually, however, its neglect of social infrastructure will catch up with it. Its streets will clog; its goods will move more slowly and more precariously; its productivity will decline.

Finally, Galbraith's model of the planning system is vulnerable to refutation by recent example. If the large corporation controls its market, how did Chrysler fail? This seems to contradict one Galbraith postulate, and it is true that *The New Industrial State*, written in the boom economy of the mid-sixties, depicts the corporation as an irresistible engine of success. Yet an answer—a tediously elaborate one, consistent with Galbraith's premises—is possible. And while Chrysler's failure might force Galbraith to casuistry to save one of his postulates, the government bail-out confirms another: that the state and the corporation are linked, notwithstanding the conventional wisdom.

In 1981, one of Galbraith's titles must seem especially poignant. Now is not *The Liberal Hour*. But when the conventional wisdom fails to solve our economic difficulties, when what Galbraith has recently termed "the war of the rich on the poor" has called forth a countervailing assertiveness from the poor themselves, when the abandonment of the public sector and the neglect of the social balance begin to hurt the middle class, then the liberal hour will return. Then, too, Galbraith's ideas will help direct us to the real problems of our economy. □

## SHORT REVIEWS



**BASIN AND RANGE** by John McPhee. Farrar, Straus & Giroux, \$10.95. Readers of John McPhee have found him, over the past sixteen years and fourteen books, to be at home in such wide-ranging provinces as Florida's orange groves, Scotland's Hebrides, Princeton's basketball courts, and Alaska's wilderness. His latest book takes him

from New York to San Francisco, via Interstate 80—a trek that illuminates our geological past and our present.

Guided by eminent geologists such as Princeton's Kenneth Deffeyes—"a big man with a tenured waistline [whose] hair flies behind him like Ludwig van Beethoven's"—McPhee focuses his exploration on the Basin and Range, the active, splitting area of land from eastern Utah to California. He shapes his narrative from the things he found most striking and revelatory—boiling springs that bring hot mantle up near the surface, islands of vegetation and wildlife in the ranges, the Great Salt Lake. Along with his departures from and returns to the Interstate, McPhee makes fruitful side trips in time, tracing the construction of our continent, the breakthroughs of geological pioneers such as Lyell and Hutton, and the development of plate-tectonic theory.

*Basin and Range* abounds in McPhee's characteristic good humor and his instinct for the delightfully incongruous yet telling detail. The language of geology becomes McPhee's, and he uses it surely and precisely. The result is a multilayered narrative that is both lucid and lyrical.

—Amy Meeker

**MAKING SCENES: A Personal History of the Turbulent Years at Yale, 1966–1979** by Robert Brustein. Random House, \$15.00. Robert Brustein has long enjoyed a reputation as one of the most contentious men in American theater. This account of his thirteen years as dean of the Yale Drama School and director of the Yale Repertory Theatre suggests that, if anything, the reality exceeds the image.

Brustein presents his story, essentially, as a morality play. Taking over a moribund Yale drama program in 1966, he works wisely and patiently to create a new curriculum while at the same time establishing a professional theater that becomes a major force for dramatic innovation. Then, just as he has reached the summit of his achievement, a reactionary and unethical new Yale president drives him from his post and destroys much of what he has built.

Almost from the beginning, it seems, Brustein treated every challenge or disagreement as a personal affront or a compelling moral issue. And even now,

his bitterness toward those who opposed him remains unabated. Few receive as much abuse as A. Bartlett Giamatti, the Yale president who fired him, or Richard Eder, the former New York Times drama critic who criticized his directing and his wife's acting. But they are not the only targets of his wrath. Student radicals, ungrateful actors, unflattering critics, unreceptive audiences, feckless colleagues—all receive unfailing condescension and contempt.

Brustein is an effective writer, and the story he tells here is a compelling one. But one reads it with bewilderment and some sadness, for while this book is a display of anger and self-indulgence, it is also, one suspects, an expression of deep personal anguish.

—Alan Brinkley

**THE ETHNIC MYTH: Race, Ethnicity, and Class in America** by Stephen Steinberg. Atheneum, \$12.95. Stephen Steinberg's cranky book will undoubtedly inflame his fellow sociologists, but his combative survey of their work is not merely mischievous. Steinberg declares that most writers about ethnic matters have belonged to one of two camps. The "melting pot theorists" expected that the assimilation of immigrants into some broad stream of middle-class values would reduce the disruptive potential of vestigial "ethnic" commitment. The "ethnic pluralists" note, and generally admire, the tendency of ethnic groups to cling to their distinctive features, so as to preserve "identity" in the face of pressures to conform and acquiesce. But both, says Steinberg, miss the point. What we think of as "ethnic" features may well be a function of class or other social imperatives.

What's more, he says, most of what we think we know about ethnic achievements, progress, or even infirmity is a mixture of myth and wistfulness. If Jews have seemed unusually interested in the benefits of education, he says, that is not so primarily because of its fundamental cultural value but because so many Jewish immigrants came from urban and mercantile/professional families. Similarly, if blacks have failed to achieve the academic or professional status of other "immigrant groups," that is less because of a cultural predisposition toward marginal economic enterprise than because, quite simply,

post-emancipation blacks were denied the chance to compete with other workers for skilled jobs or social mobility.

Steinberg's book is persuasive, though its impatience with any form of ingrained "value" will strike some readers as reductive.

**THE TERROR NETWORK** by Claire Sterling. Holt, Rinehart & Winston, \$13.95. The acts of terrorism that so captivate the news media and so paralyze democratic regimes are, in Sterling's judgment, components of an organized, well-financed plan on the part of the Soviet Union to undermine the stability of noncommunist societies. The most that can be said for this conspiracy theory is that it is plausible in several obvious ways. The Soviet Union plainly profits from social dislocation in the West, and has never allowed an excessive humanitarianism to govern its overt or covert foreign-policy deliberations. On the other hand, neither has the CIA. And while that does not make "Carlos" or the Red Brigade more palatable, critics of ideological pathologies are wise to keep their universality in perspective.

Sterling's alarms, however, should not be confused with her reporting, which, in this as in other instances, is diligent and informative. Her book meticulously traces the strands that connect episodes such as the Moro kidnapping, IRA fund-raising, and methodical assassinations throughout Western Europe with Soviet funds, Soviet organizational advice, and crude Marxist rhetoric.

Sterling asserts that "the terror network" has failed in its essential purpose—that the free nations of the West, far from unraveling in shock and despair, are united in their resolve to end the terrorist plague, and *not* at the cost of constitutional freedom or other valued traditions. Tomorrow, however, the situation may change, and, despite her strident singlemindedness, Sterling is surely right to insist that we be realistic about the terrorist threat.

—C. Michael Curtis

**SWEETSIR** by Helen Yglesias. Simon & Schuster, \$13.95. Sally Sweetsir, the extremely likable heroine of this instructive novel, is a survivor. Victimized by most of the everyday ills of society—the deadening poverty of the working class, a meaningless and humiliating educa-

tion, the brutality of unimaginative men—she nevertheless manages to preserve an impressive self-possession. She also murders her husband.

Though bizarre in summary, Sally's story becomes an utterly plausible one, and in exploring its snarled threads Yglesias exposes the kind of systematic degradation that drives ordinary people to violence. Pregnant and married to a defeated man at sixteen, Sally must teach herself to respect her own abilities and do something with them. She learns to type; she learns how and when to speak the bland, correct language of the middle class; she learns to dress and look and behave like the "foreigners" in her Maine town. What she doesn't learn is how not to be drawn to men like Morgan Sweetsir, a larger-than-life construction worker who overcomes his fear of the world by beating his wife and children and pushing them into hatred. When Sally stabs him, it is an act of genuine self-defense.

Clearly a feminist tale, in that its protagonist's downfall lies in her relationship with men, *Sweetsir* avoids slipping into tracthood. The book's concerns are always for the specific and the personal, which are conveyed with a wonderfully gritty dialogue and the humor of self-deprecation.

—Elizabeth Duvall

**MARY CHESNUT'S CIVIL WAR** edited by C. Vann Woodward. Yale University Press, \$29.95. "What marvelous experiences a little war begins to make," Mrs. Chesnut says airily, evidently relishing the shock she gives. Her diary is a record of experiences, marvelous in their proximity to the centers of southern power, from the years 1861-1865.

Mary Chesnut was a brilliant woman, and though, like all diarists, she succumbed at times to vanity and pettiness, she was never silly. She appears to have been prouder of her wit than of her person. She was blunt, rich, impatient, well-educated, garrulous, and childless. She therefore had time, energy, and means to surround herself with good company. She was among the "honorable members" of "Mrs. [Jefferson] Davis's republican court." When her husband, James, was a United States senator, she lived in Washington. When he resigned (the first southerner to do so) to help form the government in secession in Montgomery, Alabama, she lived there. She was sleepless

in Charleston the night the first shots of the Civil War were fired. When the Confederate capital was shifted to Richmond, Virginia, the Chesnuts shifted too, to a house across the street from the Davis's. James was the President's aide-de-camp.

Readers may think they know this book already as *A Diary from Dixie*, published first in 1905 and then, in an expanded version, in 1949. But Professor Woodward, following a stray remark of Edmund Wilson's, has turned to Mrs. Chesnut's original manuscript. Wilson noticed the diarist's "uncanny instinct" to take "advantage of the actual turn of events," whose outcome she could not know, and "develop them and round them out as if she were molding a novel." He pronounced the writing "a work of art," and Professor Woodward has proved him right. It turns out that Mrs. Chesnut did keep a day-by-day journal in the sixties, but the diary she is famous for was the result of energetic revision—developing, rounding, molding—in 1875 and in the 1880s, the last years of her life. Woodward's new edition restores words from the original record where they add meaning, identifies the entries by date of composition, and, probably most valuable, redeems the text from numerous silent insults inflicted by the previous editors. Fortunately, the result—to borrow a word that Mrs. Chesnut borrowed from Abraham Lincoln—is not too "interruptionous." The editor has respected the historian's curiosity about the diary's provenance and the reader's pleasure in its art; both are enhanced.

—Deborah McGill

**HARBOR OF REFUGE** by Stephen Jones. Norton, \$16.95. As a very green Coast Guardsman, Mr. Jones was assigned to lighthouse duty on a tower perched atop a breakwater out in Delaware Bay. Harbor of Refuge Light enjoyed random supervision, decrepit equipment, uncertain supplies, a cracked foundation, and a history that inspired no confidence in the young seaman. He periodically measured the crack and made futile attempts to interest his superiors in its lethargic but perceptible progress. He also watched sea, weather, ships, and his colleagues, who may have been unremarkable fellows ashore, but, like the author himself, became, in their isolated post, subject to fits of



battiness. There must have been dull stretches at the light, but Mr. Jones has considerably dropped them overboard. He has retained fine descriptions, zani-ly disjointed conversations, mechanical crises, and wrecks. His account of the great March gale is superb in its eerie mixture of practical action and suppressed terror. His report on the sea gulls in the water tank is outrageously, roaringly, paralyzingly funny. Illustrations by Richard Brown.

**ERNEST HEMINGWAY: SELECTED LETTERS 1917-1961** edited by Carlos Baker. Scribner's, \$27.50. It is no surprise that Hemingway wrote good letters—candid, spontaneous, and ranging from severely serious to wildly fantastic. What is surprising is the extent to which he shifted his style as he moved from one correspondent to another. One has the impression, reading this collection, that half-a-dozen different voices are speaking, each saying something of interest. Hemingway once confessed, "Any time I can write a good letter it's a sign I'm not working," but he was, consciously or not, mistaken. Each letter was a fragment of a huge nonfiction work—the self-portrait of a complex and brilliant man. Index.

**SAND RIVERS** by Peter Matthiessen. Viking, \$19.95. By describing African landscape and his various companions, Mr. Matthiessen has succeeded in making an interesting report of a photographic safari on which nothing ever happened. This is no small accomplishment. Photographs by Hugo van Lawick.

**THE CHANEYSVILLE INCIDENT** by David Bradley. Harper & Row, \$12.95. Mr. Bradley's hero is a cross-grained professor of history living with a woman psychiatrist who keeps asking, "Do you want to talk about it?" He is black and she is white, which gives them plenty to argue about but does not necessarily endear them to the reader. Their partnership is the defect in a novel that is admirable in other respects, for Mr. Bradley portrays believable people from several levels of black society in a small Pennsylvania town, shows how that society interacts with white society, and reconstructs a ferocious episode on the local branch of the Underground Railroad. He writes well of hunting and woodsmanship and makes

skillful use of detail that has the ring of authentic regional tradition. He also explains the persistence of racial resentment in a black whose professional success is solidly established. For this last and important point, the psychiatrist was no doubt necessary to the action—but Lord, she is a bore.

**THE CONQUEST OF THE NORTH ATLANTIC** by G. J. Marcus. Oxford, \$25.00. Mr. Marcus begins with Irish monks, for whose seamanship he has a high regard, and ends with the arrival of European fishing fleets on the Grand Banks. There is so much information on early ships and navigation methods in this short history that readers attracted to the subject will find the book valuable despite its oddities, which include the most backhanded glossary ever compiled. English sailing terms available in any decent dictionary are listed in alphabetical order, followed—in nonalphabetical order, naturally—by their Old Norse equivalents, which are what the reader actually needs to look up. Notes, bibliography, index, illustrations, inadequate maps.

**UNDER THE NORTH STAR** by Ted Hughes. Viking, \$14.95. "The gleeful evil Wolverine" is only one of the Arctic creatures that Mr. Hughes celebrates in verses that tinkle like falling icicles, wail like winter wind, and stick in the memory. Illustrations in color by Leonard Baskin.

**REFLEX** by Dick Francis. Putnam's, \$11.95. The hero of Mr. Francis's latest suspense story is an aging (thirtyish) jockey who is growing bored with horses that fall from under him and then roll on top of him. He amuses himself with photography, and this hobby sets off a plot that moves in a narrowing spiral, gathering in action and sharply sketched characters along the way to a smashing finish.

**THE ROAD TO HAWORTH** by John Cannon. Viking, \$10.95. Patrick Brunty, a bright but penniless young Irishman, worked his way out of County Down and ended as an English clergyman named Brontë, rector of Haworth and father of Charlotte, Emily, and Anne, who were a great credit to him, and of Branwell, who was not. Mr. Cannon has tracked Patrick's progress and also learned something of earlier Bruntys.

Most of what he reports is, as he admits, not of his own discovery but comes out of nineteenth-century books by pioneer Brunty chasers. Mr. Cannon's text is rambling and repetitive, with considerable space devoted to scenes based upon guesswork, but there are some fairly definite and interesting facts discernible in the mist. Illustrations, family tree.

**THE GENIUS OF GEORGE WASHINGTON** by Edmund S. Morgan. Norton, \$12.95. Professor Morgan defines Washington's genius as a superb understanding of power and its uses. The Washington letters he has chosen to accompany his essay reveal enormous practicality and an icy common sense unswayed by hope, fear, gratitude, or resentment. Perhaps such unemotional intelligence is indeed the basis for successful operation of power, whether military, political, or psychological. Washington knew how to exert all three. Notes, index.

**GULBADAN** by Rumer Godden. Viking, \$14.95. Gulbadan (the name means "Rosebody") was a daughter of the first Mughal emperor of India, Babur the Tiger, and aunt to the Emperor Akbar, who asked her to write her recollections of family history as a contribution to his own biography. Possibly because Gulbadan failed to refer to her nephew as either "jewel of the imperial mine" or "unique of the eternal temple," little of her text was used by the court biographer, a man who dipped his own pen in honey and rose water. Fortunately, a copy of Gulbadan's memoir survived and has been translated. Working from the translation and her own knowledge of India, Ms. Godden has reconstructed the story of Princess Gulbadan. It covers eighty years of Mughal history, involves great danger and great luxury, and illustrates the impressive degree of authority possessed by Islamic noblewomen. The book is generously illustrated with delightful Indian and Persian miniature paintings, located by Helen Topsfield and reproduced in color. Bibliography.

**NEW ENGLAND REFLECTIONS: 1882-1907 Photographs by the Howes Brothers** edited by Alan Newman. Pantheon, \$25/\$12.95. A photographic essay from this book originally appeared in the January *Atlantic*.

—Phoebe-Lou Adams

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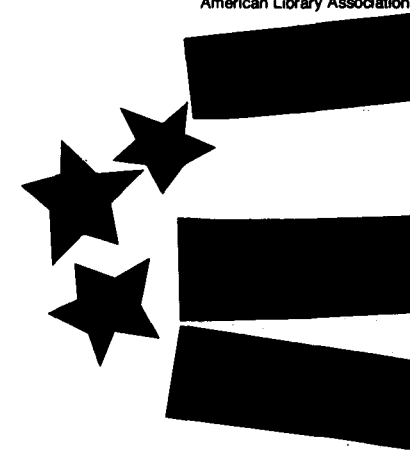
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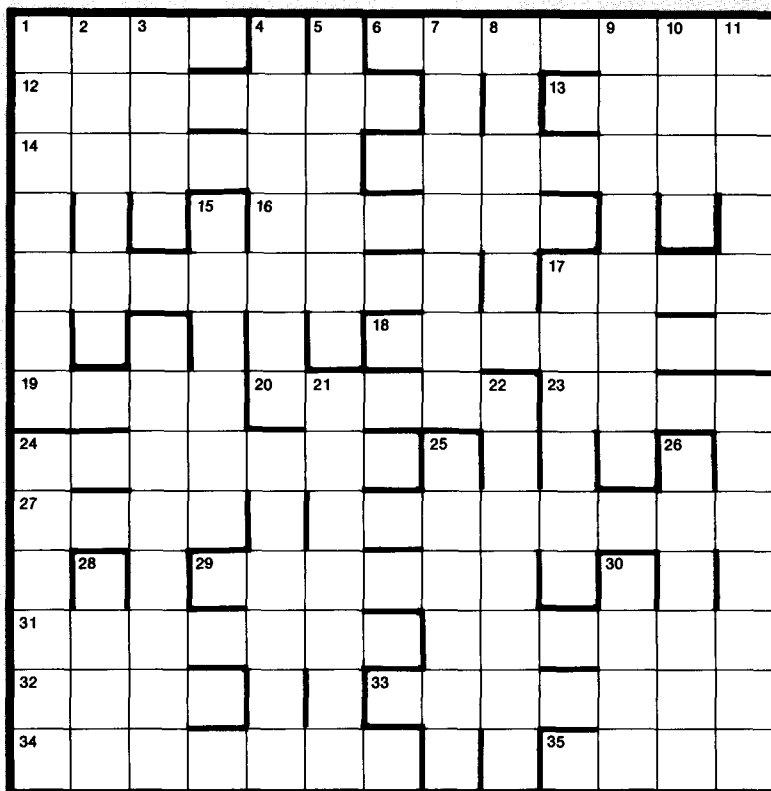
# THE ATLANTIC PUZZLER

BY EMILY COX AND HENRY RATHVON

## MEN OF ART

Eight unclued entries have something in common. The spelling of these entries is not the same in all references; as an aid, their unchecked letters are given in the words IRA, MORT, NAT, DAVE. Clue answers include three proper nouns; 6A and 3D are uncommon. Punctuation may be used deceptively.

*The solution to last month's  
Puzzler appears on page 5.*



### ACROSS

1. Man of art? Say, "Bosh!" (4)
6. Material used by Indians for making canoes was binding tape (7)
12. Firm in Pennsylvania involved in child's clothing (7)
13. God of two eastern states (4)
14. Parts of tree having small places for birds to perch (6)
16. Rash we developed from rope (6)
18. Approval put Dali off (7)
19. Sound of fly makes you mad (4)
20. Cultivate high grade grass (5)
23. Confess something bad and good (4)
24. Pitcher makes curve be slow in leaving (7)
27. Timber in position (4)

29. Cheap ring (brass) in fool's possession (6) (*hyphenated*)
31. Idiot tails auto at 100—is this the result? (7)
32. Antelope's unfinished dash (4)
33. Peanut I developed from plant (7)
34. Player in baseball team sends back . . . (7)
35. . . . stock of money for entertainment date (4)

### DOWN

1. With a cargo of fish, ship goes at a leisurely pace (7)
2. Seize a bit of heroin and a pipe (6)
3. Limbless animal in a shell (4)
4. Stew boils, but with no oils or seasoning (7)
5. Rock bottom temperature (6)
7. Saint embraced by a European churchman (7)
8. This woman's an awful teaser (6)
9. I drop ice clumsily at intervals (8)
10. Twilight is calm (4)
11. Pervert lives in depressing time (6)
15. Current currency, in a manner of speaking (6)
17. Half of bovine hide used for shoe (6)
21. Venison with gravy served up brought refreshment (7)
22. Command cited at riots (7)
24. Scrape out part of a typewriter (6)
25. Goner I converted to a Christian scholar (6)
26. Swallow most of cocktail (6)
28. Approaching white boundary (4)
30. People with unlimited bus fare (4)

**Note:** The instructions above are the special instructions for this month's puzzle. It is assumed that you know how to decipher clues. For a complete introduction to clue-solving, write to The Atlantic Reprint Department, enclosing a self-addressed, stamped envelope.

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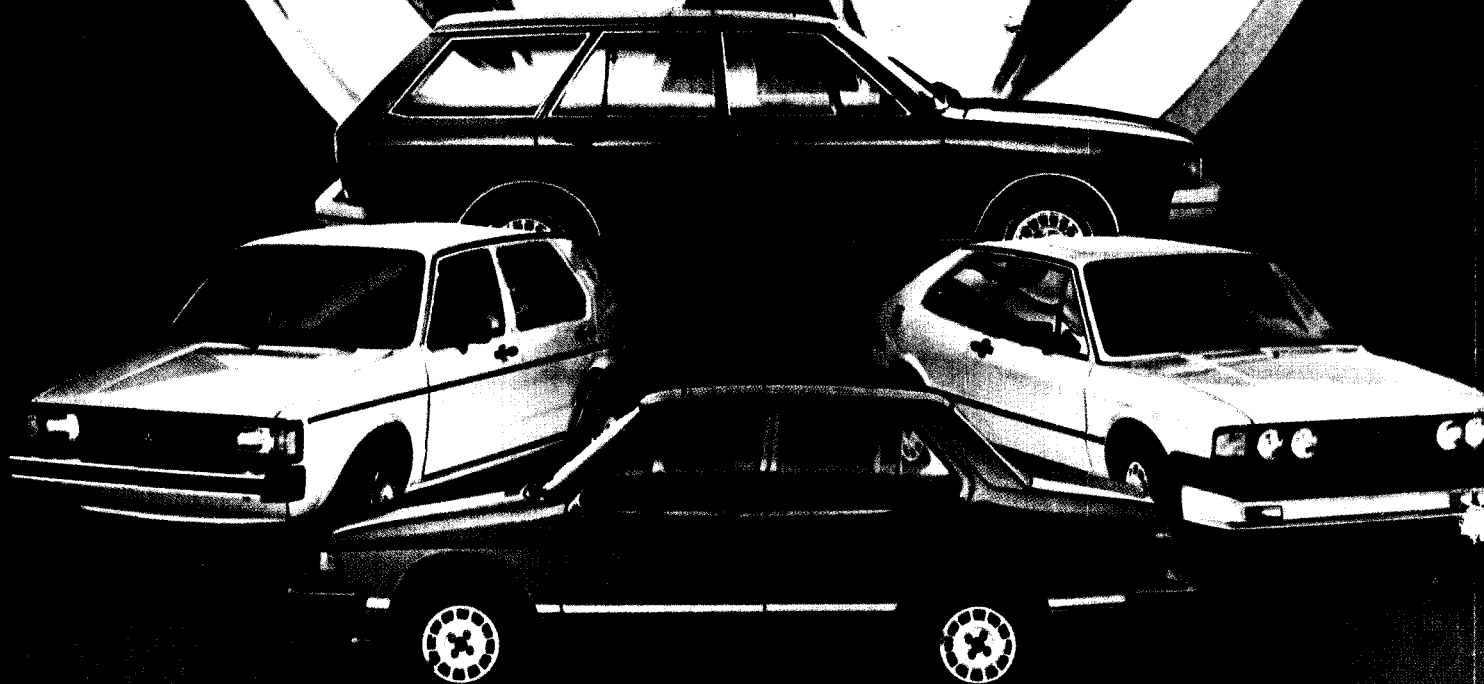
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